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ORISSA REVIEW

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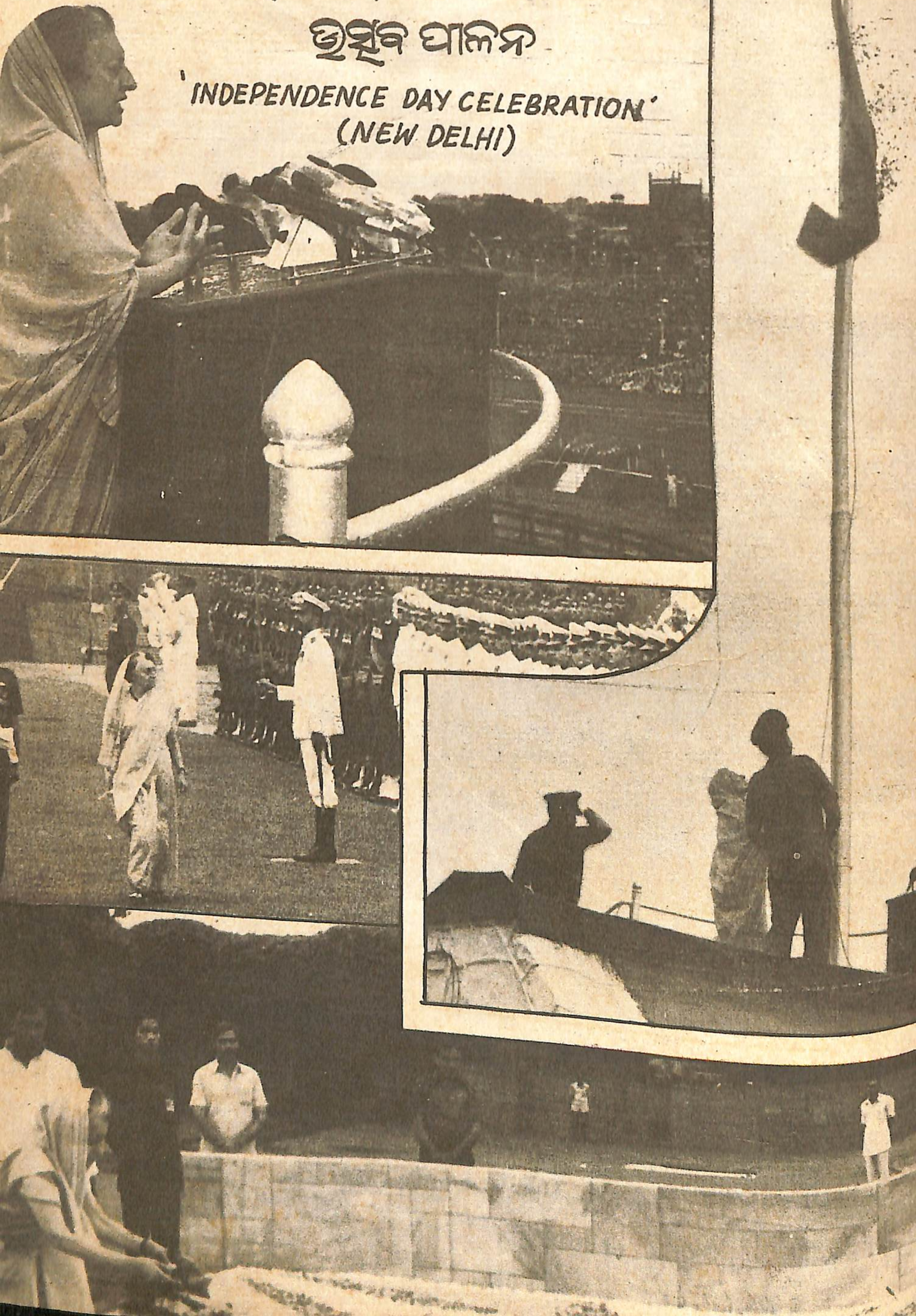
'INDEPENDENCE DAY CELEBRATION' (NEW DELHI)



Orissa Review

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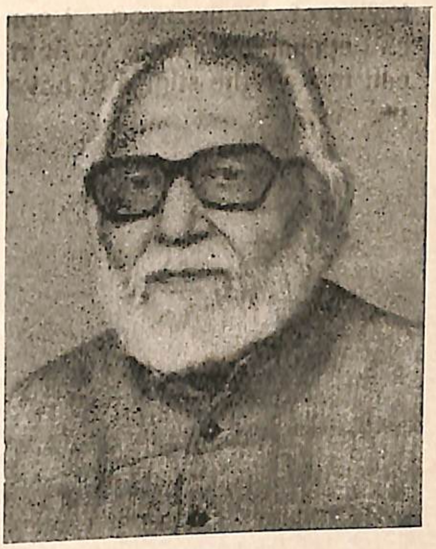
Contents

			Page
Literacy and Primary Education in Orissa	Prof. Bama Charan Das	..	1
Is Universal Elementary Education an impossible goal ?	Dr. Srinibas Sahu	...	3
+2 Education in Orissa ...	Dr. Ghanashyam Samal	..	5
Animal Husbandry makes rapid stride in our State.	Shri Kuanria Majhi	..	7
A Strategy for establishing Agro and Forest based industries in Phulbani district.	Shri Satyabadi Mishra	..	9
Problems of Tribal Education in Koraput district.	Shri P. C. Mahapatra	..	14
Prospects of Scientific Fish Culture in Kalahandi district.	Shri S. N. Mohanty	..	21
The Story of a successful life (Self madeable person).	Shri Haraprasanna Das	..	23
Onward environmental planning ..	Shri Gyana Ranjan Mohanty	..	25
Bio-resources of the Sea : A glimpse on food problem.	Shri P. K. Mohanty	..	27
The role of youth in the year of productivity.	Shri Sanjaya Kumar Pradhan	..	29



Unique opportunity to do my best for the people of Orissa : Shri Pande

The following is the text of message of Shri B. N. Pande, Governor of Orissa to the people, broadcast over A. I. R. on the assumption of office :

"I deem it a privilege to have been called upon to serve the people of Orissa. I have accepted the assignment of Governorship with all humility and I treat this as a unique opportunity to do my best for the people of Orissa

"Orissa has been the land of great cultural traditions. It is also the land of Lord Jagannath, the glorious cultural traditions of Orissa find their reflection in captivating temples and monuments that litter its landscape. Nature has generously endowed this State with its bounties. As a great pilgrim centre, Puri along with other three Dhams like Badrinath, Dwaraka and Rameswar, had a great integrating influence on the country.

"It is unfortunate that such a State with great potential has been smarting under poverty in spite of the rich natural resources. I am happy to find that the Government have launched a multi-pronged drive for eradication of poverty and a much-needed industrial climate has been created. The 20-Point Programme, a national programme given by our beloved Prime Minister, will be implemented in Orissa with all vigour. This is bound to improve the condition of the poor in general and our Harijan and Adibasi brethren in particular.

"I am aware of the fact that the developmental programmes have received a serious setback because of recurring natural calamities like cyclone, floods and drought which have afflicted the State with an alarming frequency. The people of Orissa however have shown great courage and fortitude in facing these calamities and have extended their hand of co-operation to the Government for speedy relief and rehabilitation operations. It is time that we face the challenges and work for a better future.

"I ha the privilege of being associated with the University education. As the Chancellor of the Universities in the State, it will be my endeavour to create a proper environment for a much-needed rapport and affection between the members of the faculty and the students and to improve the standard of the Universities. After all, these are the institutions which shape the future citizens of our country and we can ill-afford to neglect them.

"The people of Orissa have always shown a great understanding and feeling of brotherhood. I convey my good wishes to all sections of people and appeal to them to work in a disciplined and dedicated manner so that we can remove the stigma of poverty and usher in a new era of prosperity and progress."

Literacy and Primary Education in Orissa

Prof. Bama Charan Das

It is a matter of regret that the percentage. of literacy in the State of Orissa stands at about 35 per cent even after 36 years of independence. Some countries in S. E. Asia have improved their percentage of literacy by 50 in a period of two decades. It is high time that an intensive study be conducted to identify our defects. so that an accurate diagnosis can be made and then only priorities can be ascertained to utilise the limited resources we have in the most effective manner. It is for the Education and Youth Services Department to arrange for such a study. It is hardly possible on the part of educationists outside the general framework to either find the time or the means for intensive research in the area.

The problem of literacy is being tackled in two fronts now. One is adult education and the second is expansion and qualitative improvement of primary education. The first is no doubt effective to a limited extent, provided there is some amount of sincerity of purpose on the part of the administrators and workers of the scheme. It appears however that neither they take the matter seriously so that hardly any work is done at the adult literacy centres. though reports on the successful implementation of the scheme are sent regularly. They reach Delhi subsequently and the authorities publish them, satisfying themselves and other authorities. People in general do not care to read them, for they do see what is happening to the schemes at their door fronts and feel sick about the waste of public money to which they have also contributed.

The second and major scheme for improvement of percentage of literacy is expansion and qualitative improvement of primary education. From the Fourth Survey Report on education in Orissa it appears that 94 per cent of the population and 82 per cent of the habitations in Orissa have primary education facilities within a distance of 1 Km. This is very good indeed. But it is necessary that facilities for 100 per cen of the population should be made available The habitations that do not have the facilities are located in out of the way places and isolated areas. The number of children of the age-group 6—11 in any circular area having a radius of ½ Km. or even one 1 Km. would not justify establishment of a Primary School. Neither would it be financially possible in near future. So facilities for primary education in these areas would be possible only by establishing the old-type 'Chatsalis' with a local person trained as a teacher. It should be enough for the present if the children of these areas are acquainted thoroughly with the three Rs. The school building will be no problem as an open hutment would be gladly constructed by the residents with materials available at no cost.

The most important impediments to successful implementation of the schemes for primary education are wastage and stagnation. An attempt was made years back to study this problem in depth by the State of Maharastra. The Ministry of Edncation is also conscious of the problem and are trying to pinpoint the defects. But as yet none of the solutions proposed and implemented have had and substantial effect. The fourth Educational Survey in Orissa records a drop-out of 60 per cent by the 5th standard. But one is likely to believe that in fact it is much more.

Apart from economic reasons which prompt parents to drop-out their wards from schools, the main reason appears to be the conviction of parents that the kind and type of education imparted in primary schools is not relevant to the environment in which they live. There may be some who would raise their eyebrows to this suggestion. In order to dispel such ideas it is necessary that this matter should be studied in depth. If it is found to be true, it becomes necessary to discard the system of one course of studies for all and to introduce different courses of studies and work, for different areas, putting emphasis on learning techniques relevant to the surroundings techniques which will immediately improve the earning capacity of the child as soon as he leaves school and takes to a profession which he would have taken to even if had not joined a school.

At present the number of primary schools in Orissa is about 32,000, the student-teacher ratio 33:1 and the number of sub-inspectors who are supposed to keep an eye on the work of teachers is unfortunately very low. (Perhaps this is the reason why it is not given in the report of the Fourth Educational Survey). The Sub-Inspectors have multifarious administrative duties and hardly find anytime to inspect the work of primary school teachers. If one is to guess, I may say that more than 90 per cent of the primary schools are not inspected during any year.

The second and more important problem is the large number of children in habitations and villages where facilities are available. Such children consist mostly of girls of the poor people in society and children of people belonging to the Scheduled Castes and Tribes. It is the economic condition of the family that prompts parents to utilise the children in some way to earn a few coppers to add to the family income. No amount of social pressure or persuasion will help in such a situation. Somehow or other this layer of people have not yet been convinced that it is possible on the part of their children to rise up to higher levels socially and economically, if they are educated. Financial assistance to the family in the form of feeding and clothing the children will certainly help to a great extent. I believe there are schemes to this effect and provision is made in the budget for the purpose. If that is so, why is the scheme failing ? Perhaps at the grass-root stage of implementation not much is done and the family does not really get the help. So not only more substantial provision should be made, but what is more important Government should see to it that the money provided in the budget is fully spent for the purpose for which the legislators grant it.

It is no wonder that teachers have a merry time and no body bothers if no work is done in the primary schools for more than two-third of the year. How can any body expect that wastage and stagnation would not be about 75 per cent (drop-outs only are 60 per cent). It is therefore necessary that (*i*) for administration work in connection with primary schools, separate officers should be appointed, (*ii*) for at most every 100 Primary schools one Sub-Inspector should be appointed, (*iii*) sufficient number of supervisory officers should be appointed to watch the work of Sub-Inspectors. There are various other administrative details which can be adopted to reduce wastage and stagnation. There is hardly any space here to describe them in detail.

The latest suggestion of the Union Education Minister is to replace the current annual detention examination up to Class VIII by a system of continuous evaluation throughout the year. The system is prone to abuses, as has been found in the case of Universities. But since in Elementary education even the annual examinations are internal assessments, abuses, if any, are there and matters cannot be worse. So the suggestion is worth trying. At the same time the further suggestion that no body should be detained is also worth trying. This experiment should however be tried at the first instance only in the first three classes and not in eight classes. If the inspecting system is strengthened, the suggestions would be really effective in checking wastage and stagnation. Qualitative improvement is bound to follow. The crux of the problem however lies in strengthening the inspecting and supervisory staff which is an expensive affair. But in my opinion, the expenditure is worth incurring, for most of the money now spent seem to be wasteful and it is necessary to stop this before allowing more money on this account.

Is Universal Elementary Education an impossible goal?

Dr. Srinibas Sahu

The need for universal elementary education is not a new revelation which has come to us after the independence of the country. Much before our independence many of our national leaders realised its importance. The arguments adduced by Gokhale when he pleaded for universal elementary education long before any one dreamed of independence hold good even today. Gandhiji for obvious reasons very wisely motivated private resources for imparting adult education. He was even aware of the non-formal approach as is clear from the way he addressed himself to the problem. More than half a century's efforts of private organisations as well as of the Government have not yet brought light even to 50 per cent of our brothers and sisters. If we look at the problem with this historical background, we are automatically led to believe that either we have not realised the dimension of the problem or that the problem is insoluble.

But if one goes through all the literature which has been produced on this problem and the concern which legislators and administrators at all levels have been expressing and the constant efforts which Government have been making time and again, it would not be right to think that the magnitude of the problem was not realised nor can we wash our hands by saying that the problem is insoluble. Small countries have in a few cases succeeded in achieving this goal. The problem is particularly thorny in our country not only because of its size but also because of the hundreds of languages, the differing traditions and the differing background histories of the various States and regions. All these have been changing, the agencies have alternated but the ultimate result has not been satisfying. In some States like Kerala, we can look with satisfaction at the progress made while in some States like Orissa, Bihar, M. P., one is likely to feel frustrated. It is, therefore, necessary that whatever might be the solution and methods evolved at the Centre, the operations not only in each State but in different regions of the State have to take into consideration the factors prevalent even at the block level and motivated teachers of the region have got to be identified if our attempts at universalisation are to produce results within the next decade.

The other factor which we have to keep in mind is giving adequate tools to these teachers. These tools consist not merely in giving a slate and chalk and a primer and perhaps a lantern but. the benefit of science and technology have to be brought into use if the collosal problem facing our coutry is to be solved. This is all the more necessary since over the last half a century, there has been a consistent lag between the pace of attempts at universalisation of elementary education and the rate of population increase. This has been brought to use by the 1981 census. Hence, in addition to the motivated teachers and leaders in the community, the advantages of mass media by traditional methods as well as through satelite communication, have to be made use of.

Not that these attempts were not made but somehow the results have not been commensurate and the gap has been growing. I have had some occasion in course of my service in the State to visit and feel the pulse of some of these centres. The nature of some of the locations is such that it is well-nigh impossible to get the services of such devoted people. There are hamlets in remote areas where the literacy is zero and it is not possible to find the local teacher who has basic education nor is it possible to get a person from outside the hamlet to stay with the people and bring home to them the message of literacy. In some other places, it is only the younger generation who have started going to school and for imparting education to the age group 16—35 our search for the teacher will yield a young boy or girl of 14 or 15 who has to be given this responsibility and who obviously cannot teach an older age group. Apart from this problem, there is the usual problem of insincere and absentee teachership of which every one is aware. What is needed, therefore, is to identify a few people who have a certain amount of zeal, pay them adequately if they do not have resources of their own, train them in modern educational technology.

In this connection I must say that there are a few persons who without any economic reward take their job with pleasure. During a visit to one of the Mahila Samities in the Dhenkanal district, I discovered to my pleasure that the Secretary of the Samiti, a house-wife of the village, not only was teaching the alphabet to young women of the age group 15—30 but was also teaching them sewing and needle work and also some songs. I was amazed. One can realise the amount of motivation that these illiterate women must have received from this village house-wife who happened to have read up to 9th Class at her father's place. It is difficult to identify people with this kind of background but if universalisation is to succeed, it is only people of this kind, living in villages who can deliver the goods.

So far as the efforts of the departments or media are concerned, something more is to be done than acting in a routine manner. I was associated as the Secretary of the Board of Secondary Education, Orissa, with the introduction of the School Broadcasting Programme from Cuttack. Almost 20 years have gone by but I do not know whether any improvement has been made and whether the programme is carried home to the school children for which it is meant and whether it has provided motivation and excitement to even 10 per cent of the children. In the United States, programmes for children have been more pragmatic with proper arrangement for a feed back and therefore, they have been more effective. But that is done mostly by private and voluntary agencies.

Another problem which is peculiar to a poor and vast country like India is that whenever a new method or technique or strategy is used, the up take of the masses is lacking. In a country like Austrelia lessons through the Radio have taken up with avidity by the parents and children living hundred of miles away. This was possible because of certain amount of awareness among them. Whatever programmes the Government or the Directorate evolves, however pragmatic and useful it might be, however dynamic the agents might be, if there is complete indifference at the other end, the problem becomes much too difficult. Our people with the background of fatalism and traditionalism, of isolation from the social ethos, smothered of initiative and self-help, an impregnable wall stands between the agents of change and light and growth and the indifferent fatalistic mass of humanity not even realising what they are missing. This is crux of the problem. Unless we find a solution and find our allies from among them and teach them the methods and give them the tools, the history of the last half a century will repeat itself. Universalisation of elementary education needs, therefore, a missionary zeal on the part of both Government officers as well as the agencies working among the people, if it is to succeed. The development of suitable books, devising a system of delivery of the books even after the literacy has been attained, motivating them for economic development within the local economic limitations, providing them with tools like Radio and even community television sets and books for the neoliterates, are all tools which have to be produced with care and delivered in adequate quantities, so that these agents of change will be able to operate effectively. All these factors have

(*See page 30*)

+2 Education in Orissa

Dr. Ghanasyam Samal

The Kothari Commission recommended the following educational structure in India.

(*a*) Pre-School education for 1 to 3 years.

(*b*) School education for 10 years

(*c*) Higher Secondary Education for 2 years (equivalent to I. A. or I. Sc.).

(*d*) University education for 3 years for the first degree.

The philosophy behind introduction of +2 courses is to afford an opportunity to the greater mass of students, particularly in rural areas to prosecute their studies for two years more and complete a terminal course at the end of 12-year of education. The other advantage of +2 course is to get the students interested in vocational courses so that nearly 40 per cent of them are able to earn their livelihood after completing the +2 vocational courses. This will have two good effects. The rush for admission for higher education in College will be reduced. Students of average merit would be satisfied in their lives by completing the course upto 12 years and then follow an avocation which would earn a living for them. This will reduce the problem of educated unemployment to the extent of 40 per cent. Only students of better merit would go in for higher studies in the colleges. Students of good calibre are expected to be more mindful of their studies in the colleges. This will have a good influence on the study atmosphere in the colleges. This may result in better discipline in the colleges. This may reduce even malpractice in the college examinations by eliminating sub-standard and mediocre students. This is likely to make qualitative improvement and seriousness in the pursuit of higher study for acquisition of knowledge.

The +2 stage differs from the existing intermediate stage of our colleges in respect of its importance, meaning, nature and scope. For 50 per cent of the students who will enter this stage, it is intended to be terminal course though not final learning experience, and for the rest, it is a foundation course of higher learning.

National policy on education lays down the following principles on the educational structure to promote the development of education in the country.

"It will be advantageous to have a broadly uniform educational structure in all parts of the country. The ultimate objective should be to adopt the 10+2+3 pattern, the higher secondary stage of two years being located in schools, colleges or both according to local conditions.

The reconstruction of education on the lines indicated above will need additional outlay. The aim should be gradually to increase the investment in education so as to reach a level of expenditure of 6 per cent of the national income as early as possible".

The new system commonly known as 10+2+3 of education, is based on sound principles. It also aims at bringing out national integration by adopting uniform pattern of education throughout the whole country. Under this new system of school education, general education has been recommended upto Class **X** so that the children in their formative years get an opportunity for a balanced growth and an all round development. Diversified courses, both academic and vocational have been recommended at the plus two stage, so that education at this level should be comprehensive.

As per the national policy of education we should at this stage plan to provide two learning components, i.e.

(*a*) The general education spectrum consisting of Humanities, Science and Commerce streams and (*b*) The Vocational spectrum consisting of suitable Vocational course according to the man power needs and commensurate with the local resources, professional, physical and natural.

Out of 22 States and 9 Union Territories, 16 States and 8 U. Ts have already switched over to 10+2+3 pattern of education. Besides, all the schools affiliated to the Central Board of Secondary Education, including Kendriya Vidyalaya all over the country have switched over to 10+2 pattern of School education.

Meghalaya and Mizoram have Pre-University stage of two years after Class X. The States of Haryana, Himachal Pradesh, Madhya Pradesh, Punjab and Rajasthan are still having 11-years school system. These States/U. Ts. have agreed in principles to adopt the new pattern.

Vocationalisation of Education

The document on the Sixth Five Year Plan (1980—85) states—"Secondary and higher secondary education are important terminal stages in the system of general Education and provide a first stage for linking education with the world of work".

At present, out of 24 States/U. Ts. which have adopted the 10+2 system of School Education only eleven States/U. Ts.—Andhra Pradesh, Gujarat, Karnatak, Maharastra, Tamilnadu, West Bengal, Andaman and Nicobar Islands, Dadra & Nagar Haveli, Delhi, Goa, Daman & Diu and Pondicherry have introduced vocational courses at the +2 stage and that too on a limited scale, except in Tamil Nadu, To switch over to the new pattern of education, without introduction of vocational courses, runs counter to the spirit of educational reform.

Orissa

The 10-year pattern of schooling was initiated in our State in 1976 by merging the two junior most Primary Classes into a single class. It was in 1980-81 that two successive batches of students were merged and the new syllabus introduced in Class VIII with progressive effect so that the first batch of 10 year schooled students took their High School Certificate Examination in 1983.

One batch of students have undergone 11-year schooling and the other batch have undergone 10-year schooling. The former batch is known as Senior batch and the later batch is known as Junior batch. The Senior batch students will take admission in Intermediate classes and the Junior batch students will take admission in +2 classes. Thus +2 course starts in Orissa during the current academic year. These classes have been attached to all the existing recognised college wherever minimum infractructure facilities are available. About 33,000 students have passed in the Junior batch out of which about 26,000 are likely to seek admission in +2 classes. But the existing arrangement can accommodate about 60,000 students in +2 classes which is much more than the requirement. In order to meet the tight situation in the colleges it has been decided to hold +2 classes in morning shifts. The regular Intermediate and Degree classes may commence from 12 noon. Some of the Evening Colleges, now held in the morning hours will be held in the evening hours,. Time-table of each college will accordingly be adjusted depending on the availability of accommodation for holding different classes. It has also been decided to reduce the periods from the existing 50 minutes to 45 minutes and to increase the strength of students in tutorial and practical classes till the situation improves with the abolition of Intermediate courses from the colleges.

The Council of Higher Secondary Education established under the Orissa Higher Secondary Education Act, 1982 is looking after the academic aspect of the +2 courses. Special cells have been created in the Education and Youth Services Department and in the Office of the Director, Higher Education to attend to the administrative problems involved.

Due to paucity of funds it has not been possible to introduce vocational stream in a wider scale this year. However it is hoped that some funds may be available in years ahead to make +2 education more purposeful and meaningful.

Director,
Secondary Education, Orissa

Animal Husbandry makes rapid stride in our State

Shri Kuanria Majhi

Minister of State

Forest, Fisheries & Animal Husbandry, Orissa

Animal Husbandry as a subsidiary occupation or as a main avocation in improving the socio-economic condition of the rural poor has come to stay. During the last 3 years the following progress has been made in animal husbandry through different projects/programmes implemented in the State.

E. R. R. P.

This is a programme specially being implemented by the State Government to improve the socio-economic condition of the under previleged. To improve the lot of the weaker sections this programme has been implemented by the Government all over the State for the last 3 years. It is proposed to rehabilitate 97 thousand rural poor through animal husbandry programmes during 5 years. Out of this, during the year 1980-81, 3,418 Dairy Units, 6,020 Goatery Units, 556 Sheep Units, 97 Piggery Units, 14 Poultry Units and 225 Buckery Units have been provided to them. During 1981-82, 2,029 Dairy Units, 12,107 Goatery Units, 2,247 Sheep Units, 134 Piggery Units, 7 Poultry Units and 25 Duckery Units have also been provided. Similarly during 1982-83, 1,266 Dairy Units, 4,944 Goatery Units, 1,183 Sheep Units, 3 Poultry Units, 2 Duckery Units and 46 Piggery Units have been supplied. 75 per cent of the cost of the above units has been provided to the rural poor as incentive subsidy and the rest 25 per cent has been supplied to them by rationalised banks as loan with a very low interest of 4 per cent per annum.

D. R. D. A.

D. R. D. A. is the conglomerated new name of S. F. D. A. and M. F. A. L. It is being implemented in all the districts of the State. According to this programme, 6,334 Dairy Units, 7,310 Goatery Units, 2,009 Sheep Units, 200 Piggery Units, 102 Poultry Units and 44 Duckery Units have been provided to small/marginal farmers and landless labourers during the year 1980-81. In the year 1981-82, 5,557 Dairy Units, 12,654 Goatery and Sheep Units, 205 Piggery Units and 120 Poultry and Duckery Units have been supplied to them. So also during 1982-83 up to June, 1982. 1,484 Dairy Units, 3,364 Goatery and Sheep Units, 222 Piggery Units, 12 Poultry and 5 Duckery Units have been provided to those classess of beneficiaries.

Special livestock production programme.

(*a*) *Cross-breed calf rearing programme*—This programme is being implemented in the districts of Cuttack, Puri, Dhenkanal and Sambalpur. During 1980-81, 3,479 calves during 1981-82, 2,955 calves and during 1982-83 2,627 calves have been subsidised with concentrated feed from the age of 2 months to 28 months.

(*b*) *Poultry and duck rearing*—This programme is being implemented in the districts of Cuttack, Puri and Sambalpur. During 1980-81, 1981-82 and 1982-83, 18,094 and 4 small/marginal farmers and landless labourers have been provided with these units respectively.

(*c*) *Pig rearing*—This programme has been taken up in the districts of Keonjhar and Koraput. According to this programme, Piggery Units have already been supplied to 262 under previleged farmers during 1980-81, 305 during 1981-82 and 134 during 1982-83 up to December, 1982.

(*d*) *Sheep rearing*—This is being implemented in the district of Balangir. According to this programme 400 units have been provided during 1980-81, 349 during 1981-82 and 152 during 1982-83 upto December, 1982 to the under previleged masses of the district.

Fodder cultivation programme

This is a must for successful implementation of any animal husbandry programme. Accordingly action has been taken by this Department for extensive cultivation of fooder in the State. To educate the farmers In improved fodder cultivation, a fodder cultivation week is being observed every year. Sufficient quantities of fodder seeds and fodder roots are being supplied to the farmers for cultivation of fodder grass in their own land. Every year, a number of fodder minikits are being provided to the interested farmers to cultivate fodder. During the last 3 years, more than one thousand minikits have been provided to them. Para grass cultivation has been taken up in the shallow low lying areas on both the sides of National Highway as well as State Highways to provide nutritious green grass round the year to the cattle population of nearby villagers free of cost.

We had to keep pace in advancement in the field of artificial insemination. Technique and as such A. I. with frozen semen has been introduced in the State to produce more cross-bred progenies. One Frozen Semen Bank has been established Khapuria (Cuttack) with DANIDA assistance. From this Bank, Frozen semen which are preserved at 1970° C is supplied to different A. I. centres. During 1980-81, Frozen Semen was supplied to 62 A. I. centres. During 1980-81, it was increased to 88 centres and during 1982-83, it was being supplied to 250 centres. Lakhs of cows have been inseminated through Frozen semen technology and more than 50,000 calves have been born.

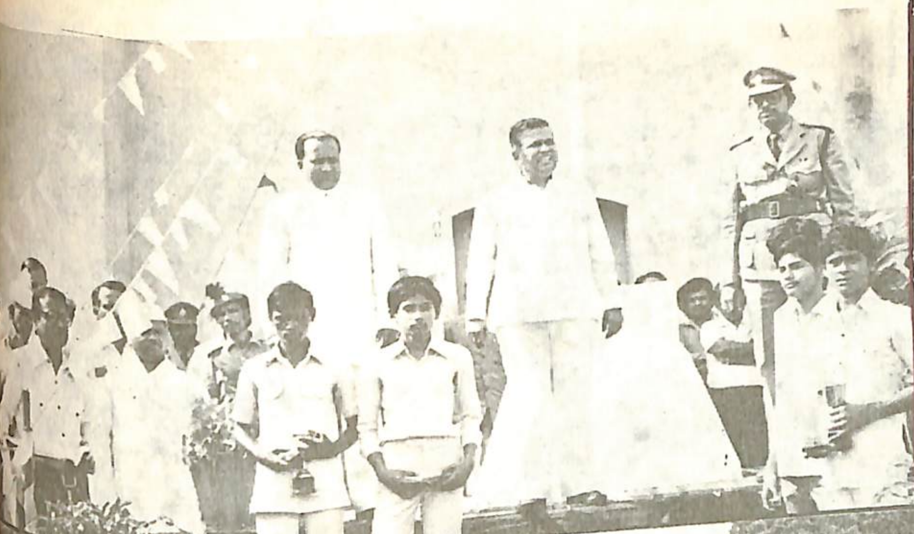
A programme on cross breeding of cattle and improvement of buffaloes using frozen semen technique is being taken up in the districts of Kalahandi, Koraput, Phulbani and Balangir. There will be a bull station at Bhawanipatna and four liquid nitrogen plants one each in the above four districts for preservation of semen of cross bred bulls in frozen State. This frozen semen will be used in the artificial insemination centres in the respective districts. This programme is sponsored by the Government of India at a total cost of Rs. 154·22 lakhs during the 6th Plan to bring about quick genetic improvement of cattle wealth of Orissa.

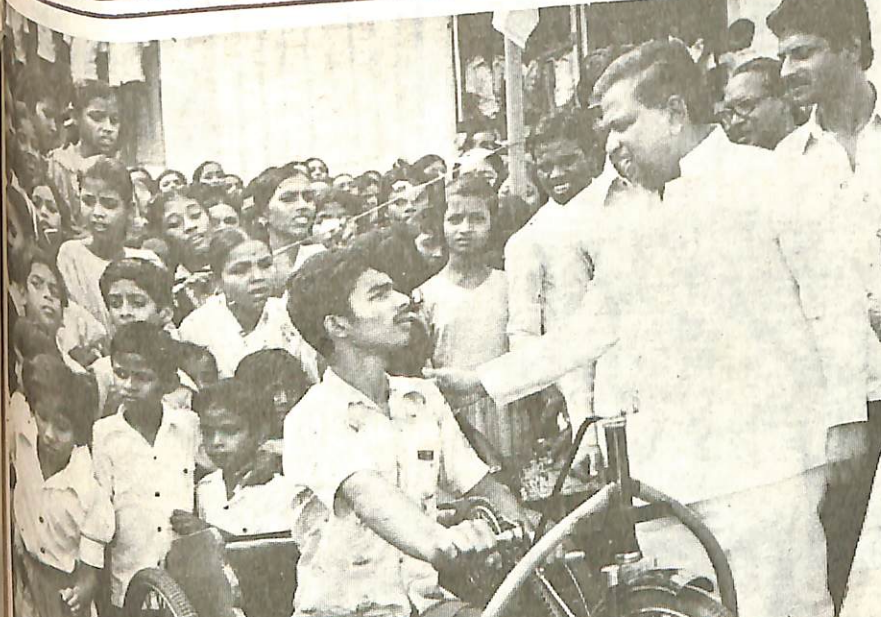
Preventive measures and treatment

511 Veterinary Hospitals and Dispensaries and 1965 Live-stock Aid Centres have been established in different parts of the State to provide preventive measures and treatment facilities to the Live-stock population of the State. The Orissa Biological Products Institute has been expanded in order to produce more vaccines to meet the growing demand of the State to Project the Live-stock against scheduled contagious diseases.

Departmental Reorganisation

The Government has taken steps to reorganise this Department in order to intensify the field supervision.





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MINISTER OF STATE, WORKS SHRI B.K. BISWAL AT THE INDEPENDENCE DAY CELEBRATION HELD AT KEONJHAR.

ଉତ୍ସବ ଅବସରରେ ମୁଖ୍ୟମନ୍ତ୍ରୀଙ୍କ
ଉଦ୍‌ବୋଧନ ଓ ଆମ ରାଜ୍ୟର
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ଦାନ...

C.M AT THE INDEPENDENCE DAY
CELEBRATION HELD AT
BHUBANESWAR...

ଓଡ଼ିଶାର ନୂତନ ରାଜ୍ୟପାଳ
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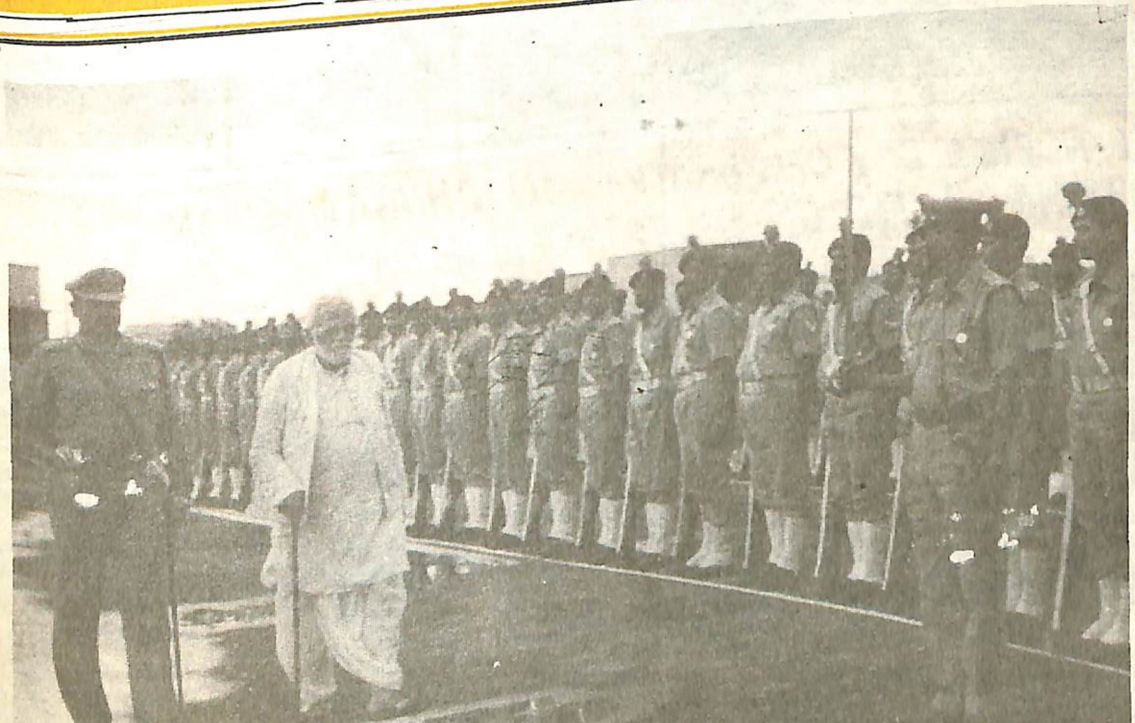

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◂ଭୁବନେଶ୍ୱର▸

INDEPENDENCE DAY CELEBRATION IN BHUBANESWAR ...
C.M. TAKING SALUTE ON INDEPENDENCE DAY...

ମୁଖ୍ୟମନ୍ତ୍ରୀ ଶ୍ରୀ ଜାନକୀ ବଲ୍ଲଭ ପଟ୍ଟନାୟକଙ୍କ
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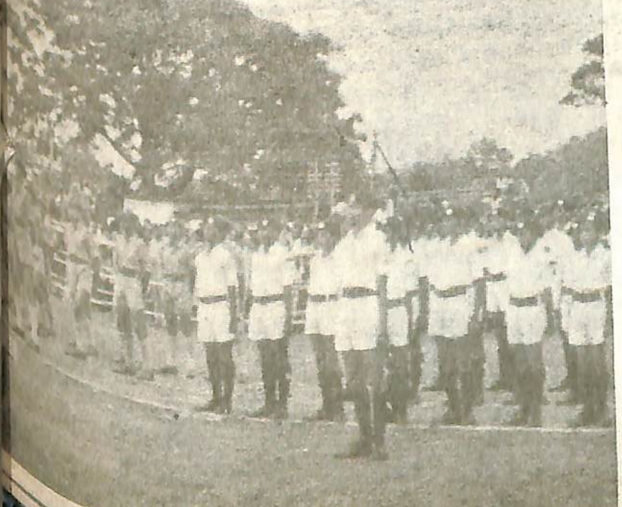

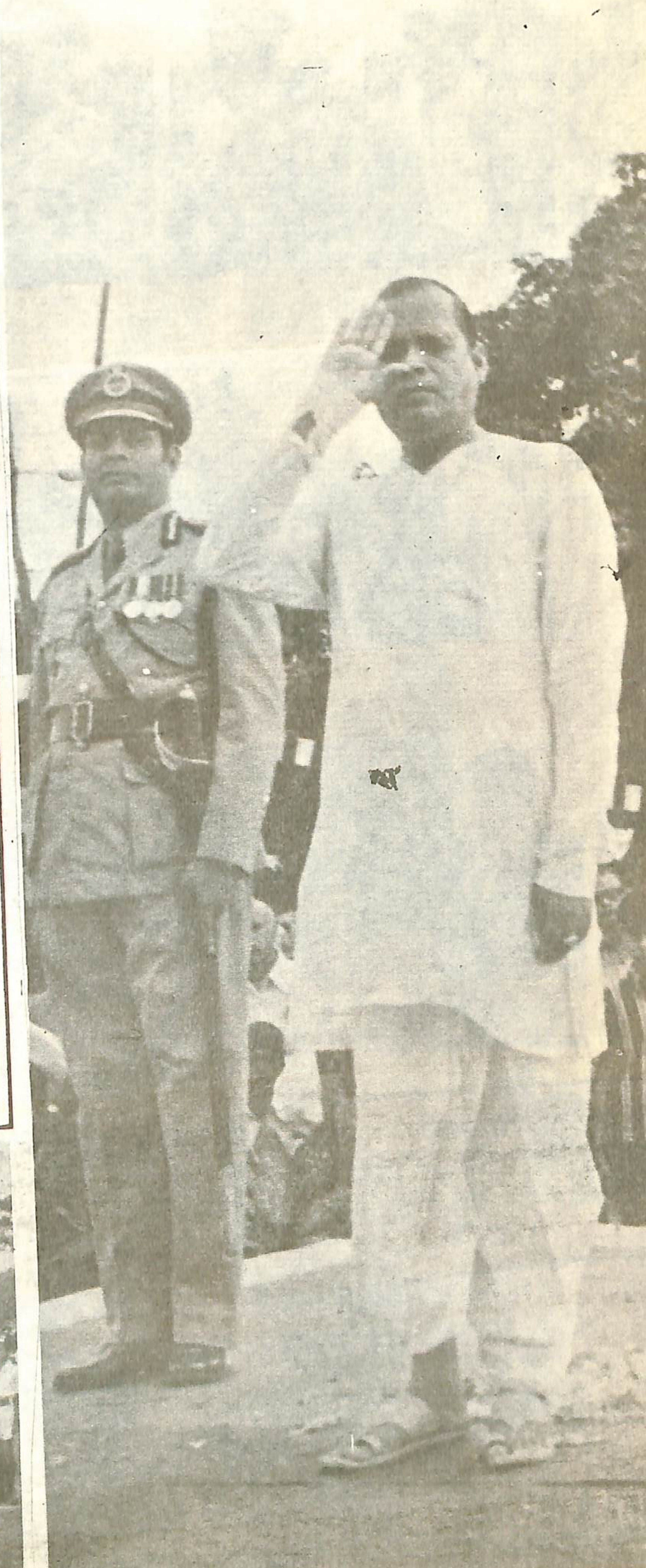

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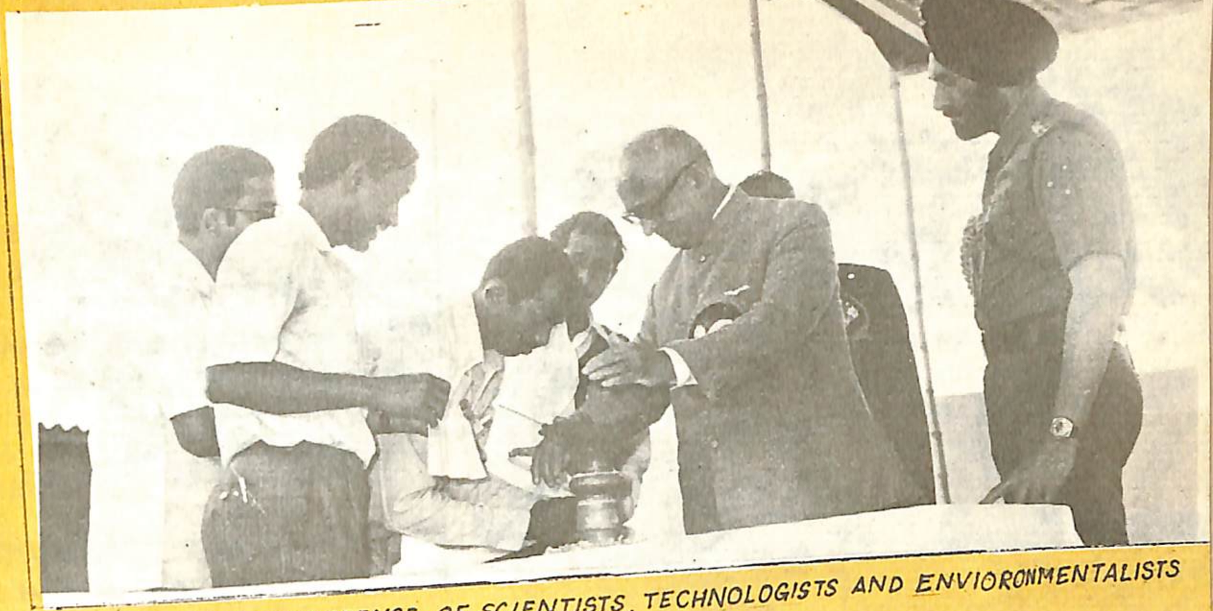
ପ୍ରଦାନ...

ON THE OCCASION OF INDEPENDENCE DAY, 1983, C.M GIVING AWAY MEDALS, SHIELDS AND CUPS TO THE MERITORIOUS POLICE OFFCERS, STUDENTS AND MUNICIPALITIES OF THE STATE.



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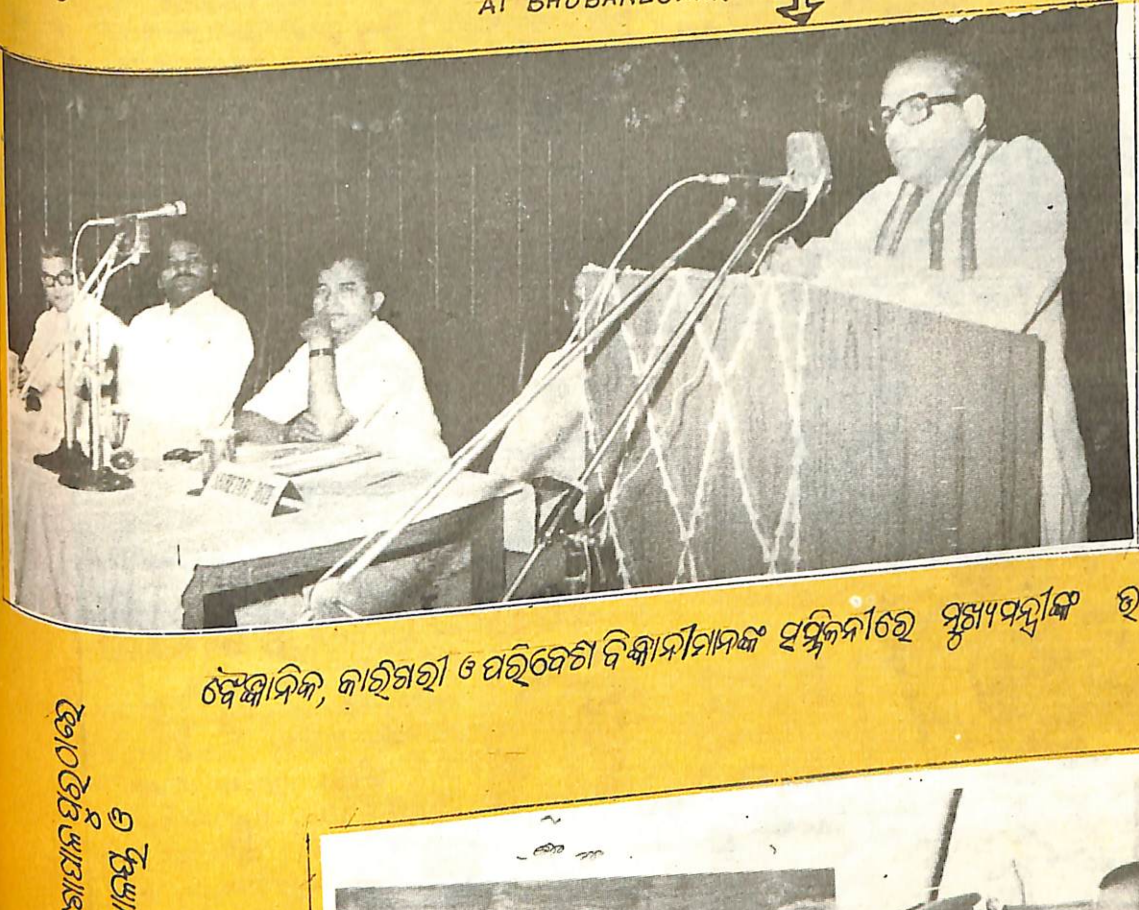
ଉଦ୍‌ଘାଟିତ (ପାରାଦୀପ)

STATE LEVEL SCEINCE EXHIBITION INAUGURATED
BY C.M. POONACHA, GOVERNOR, ORISSA (PARADIP)

C.M. ADDRESSED THE CONFERENCE OF SCIENTISTS, TECHNOLOGISTS AND ENVIORONMENTALISTS
AT BHUBANESWAR.... ⇩



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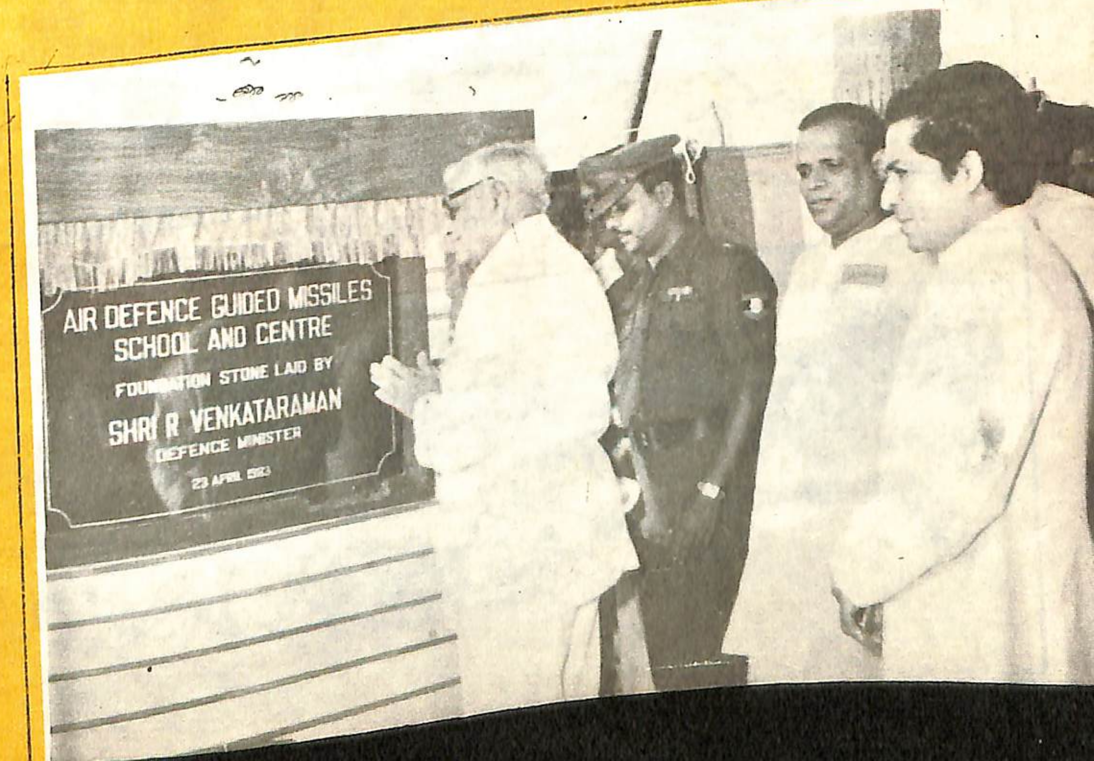

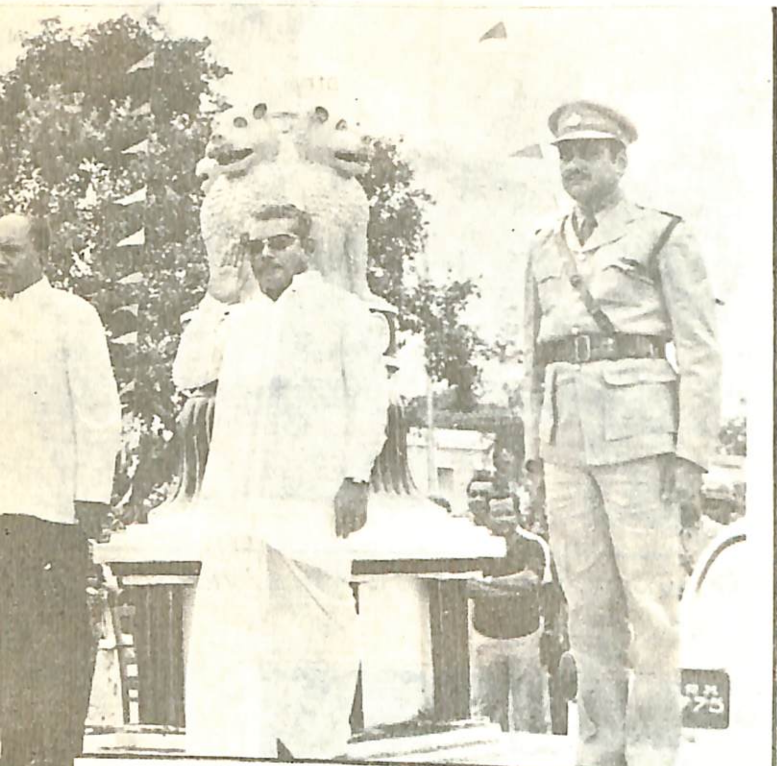

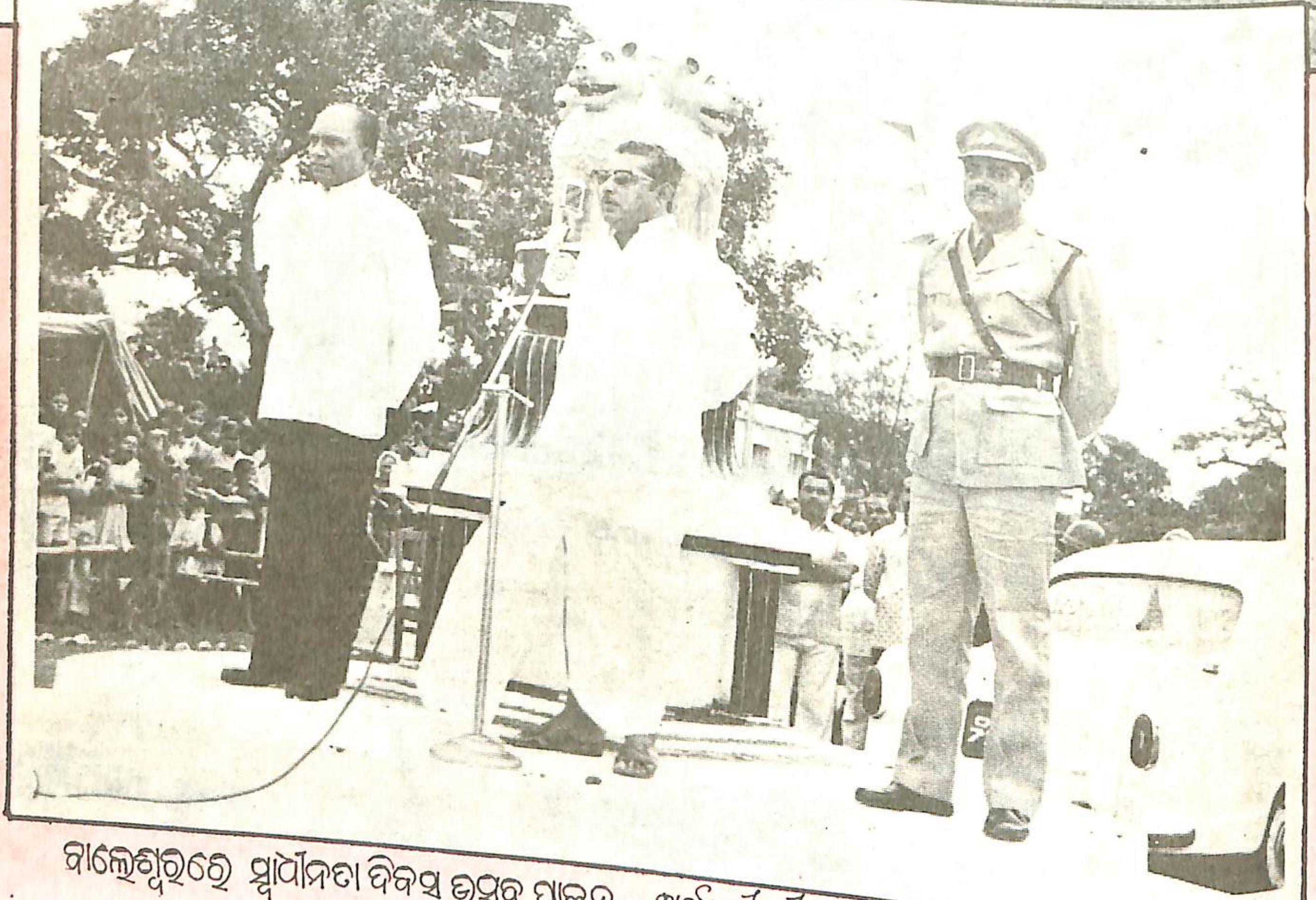

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A Strategy for establishing Agro and Forest based industries in Phulbani district

Shri Satyabadi Misra

The State of Orissa is endowed with vast mineral and forest resources, a long coastal belt and adequately available power. On account of past neglect, political instability, draught, floods, cyclone and other natural calamities and inadequate developmental effort on the part of the authorities, the State continues to be one of the backward States in the country. In the advent of new industrial policy of the Government, some of the coastal districts have been progressing.

Boudh-Khandmal (Phulbani), a land locked, centrally located district of the State comprises Mahanadi rivarine planes of Boudh subdivision and Khandmal region of Phulbani and Baliguda subdivision. This district with abundant forest and natural resources have been completely neglected in the industrial activities. Inspite of certain disadvantages like lack of basic infrastructure, communication and civic amenities in this area, some agro and forest based industries can come up in this district. The major part of the district is dense forest, the land forming a part of the Eastern Ghats. Strategy for industrial development of the district requires a great emphasis on agriculture, horticulture and forest products. Further, the attitude of the development officials is not optimistic for the development of the region and due to the low literacy among the people, the entrepreneural skill is very low. Besides, the forest resources of the district could not be properly exploited since local people have hardly accepted the changes for converting the resources into economic use.

The importance of forest for national economic development is most important in terms of ecological balance, development of agriculture and industry. The forest products are a main source of revenue to the State exchequer and preferably in Orissa with a vast area of forests, the management of forestry requires more attention. Among the forest districts of Orissa, Phulbani district is a prominent one having a favoured agro-climatic and soil conditions for growing natural forests which occupies about 67·5 per cent of total geographical area. Besides agriculture, forestry is the main source of assets and earnings for the large section of tribals in the district. Inspite of such importance of forests for earning daily livelihood for the tribals, till date, forestry in this district is highly disorganised and neglected. For the economic development of the district, the exploitation of forest resources is to be given prime importance and industrial development in the district is solely dependent upon the procurement and utilisation of forest resources since hardly any demand based industries can come up there as major people of this district are tribals and are below the poverty line with a very low rising expectation for life.

The main objective for the improvement of the forest based industry in the district and exploring the possibilities of forest based industries should be—

(*i*) assessing the area under forests, the forest produce and outturn of forest resources in future.

(*ii*) to know the forest resources utilisation pattern.

(*iii*) formulation and implementation of afforestation schemes, identification of economic forest land and turning non-economic forest zones to economic forest region.

(*iv*) maximising the productivity of forest resources and exploring the possible utilisation for industrial development in the district since the forest resources is the only significant natural resources available in the district.

Phulbani district in toto is infested with forest land (Ref. Annexure-1) of which reserved forests occupies 63·35 per cent. The major forest produce of the district are timber, bamboo, hard and soft woods, charcoal, kendu leaves, and the minor forest produce include ivory, cane, honey, fibre, fodder and non-fodder grasses, non-edible oil seeds, mahua flower, tamarind, resins and gums and other medicinal herbs.

Though the district is depending on the improvement of forest and forest resource utilisation pattern yet, no organised information regarding availability of the forest products is available with the State Forest Departments on the basis of which some industries can be started. The total outturn of the forest produce from this district is very low and most of the forest products are wasted due to lack of proper method of procurement. In the year 1977-78 (the latest statistics available) the outturn of major forest products from the district was 8·3 million rupees and minor forest products contributed only 0·4 million rupees. It is surprising to note that the rising rate of income have been associated from the total forest product except in last 2 years. While the district occupies 10·85 per cent of the State total forest land it contributes only 0·94 per cent of the State's income from the forest. Most of the forest land in the district is uneconomic and therefore devoid of generating significant income from the land. The *per capita* labour productivity in this sector in the district is around Rs. 2,700 and land productivity per hectare of land is a so low which is around Rs. 12 quite low in comparison to the State figure of Rs. 138*.

Most of the tribals usually live in the forests near the hill side and all their livelihood is maintained by consuming and selling the forest products in the nearby village areas. 1971 census figure reports the employment in the organised forest sector to be 20·6 per cent among the tribals whereas in reality it is much more than the calculated figure since they solely depend on forest for livelihood. If the quality of the tribals is to be improved, the forest utilisation pattern must be efficient, the procurement and collection of forest material must be streamlined and reasonable wages must be paid to the tribals associated with this work. The utilisation should be made more profitable by putting the resources into best alternative uses and the resource set up should be diversified to evolve a complete pack for most rational and industrial use of forest products.

Starting from the aforestation schemes to the development of forests, collection of forest produce and utilisation as per the local and national requirments, economic aforestation schemes for growing the cash crops like coffee, sishal, cashewnut, cocoa, tea should be taken up. Besides, bamboo and teak wood should also be grown in more profused manner in the organised sector. Among the medicinal herbs, the plants like sarpagandha (Roulfia serpetina), Pinkaroja, citronella, kaoda, girisinga, lumbago, myrobalam, cinemon, lemon, grass, etc., can be grown for starting some solvent extraction industries through these products.

This district is equally backward in agricultural development and monoculture is practised all through. Khandmal region is fully dependant on Boudh plane for its food requirement. Even though agricultural development of the district is constrained due to lack of irrigation, some improvements can be made in the rain-fed agriculture. The district has a good agroclimatic condition for the cultivation of turmeric, mango, jack fruit, ginger, niger, maize, ragi, tapioca, tomato, beams, arhar, green and black grams. At the present quantum of production the district has some surplus in turmeric basing on which some industries can be started. Good varieties of turmeric has already been introduced in the district and the State department of Agriculture is planning to introduce improved breeds of tapioca, tomato, ginger and peas for cultivation in the district. With proper availability of inputs and financial incentives these crops can be grown in the locality where the processing plants for these agro-products shall be established. The district has also a good prospect for growing cash crops like coffee, cashew and sishal hemp. Mulberry can also be cultivated for rearing silk worm on the basis of which silk weaving units can be started.

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* Rautray J.K., "Development Planing for a Backward district" A case study of Boudh 'Khandmal district, Orissa, unpublished Thesis, IIT, Kharagpur.

Basing upon the present and potential agro and forest resources the following industries are suggested for the district (for available resources refer Annexure-II):—

1. Fruit and vegetable processing
2. Tamarine concentrate and tamarind starch.
3. Sal seed oil
4. Paints and varnish from marking nuts.
5. Maize/Tapioca starch
6. Paper plant based on soft woods
7. Turmeric paste, dye and oil
8. Solvent extraction from medicinal herbs.

A composite fruit preservation unit can be located at Phulbani based on the availability of mango, jack fruit, tomato, beans, pea and ginger. Mango and jack fruits are plentily available and can be Procured from the forest through the tribals. Those two fruit crops have not been cultivated so far in the organised manner. Horticulture Department of the Government is planning to introduce new varieties of mango in the district. Bean and tomato is available in surplus and good varieties can also be adopted to the region without much difficulties by providing various production incentive, The processed products like mango. pulp, jack fruit cheaps and powder. tomato juice and concentrate. Canned pea and beans and ginger pickles can be produced from the fruits available in the district which can be marketed easily in townships of Berhampur, Bhubaneswar and Cuttack. Mango stones can be used for extraction of starch and jack seeds can be preserved in form of chips and be used for starch extraction.

Tamarind is available plentily in this district mostly in Phulbani and Baliguda subdivisions. A small scale unit for processing tamarind to produce tamarind concentrate and manufacturing starch from tamarind seed can be started at Phulbani. Tamarind products has a nation wide market and can also be sold locally.

Sal seed is plentily available in Baliguda and an oil extraction unit can come up at Baliguda on the basis of locally available resources. Since the procurement is given to the outside organisations on royalty basis, the supply of the raw material must be ensured for the proposed manufacturing unit.

Availability of marking nuts are more in Phulbani Forest Division and a manufacturing unit for extracting "Bhilwanel" can be started, This chemical is mostly used for anti-corrosion liquid for painting the external surfaces of ship, boats and fish trawlers. Presently these nuts are procured by the outside agencies and supplied to Nagpur for producing paints used in shipping industry.

Agro-climatic condition of this district is suitable for growing tapioca and maize which can be grown equally well in planes and hill contours. Cultivation of these two crops can be planned while proposing a starch extraction plant.

Good prospect exists for starting a mini paper plant at Boudh basing on soft wood available from the nearby forests.

Turmeric is the only surplus agro-product available in the district and be sufficient to run a sophisticated small unit for producing perfumed turmeric paste, dye and oil.

Many a medicinal and aromatic plants found in the forest of Phulbani can be cultivated and solvent extraction plants can be started which are required by Pharmaceuticals and perfume industries. Important herbs like Henben, Vinca rosea, Black pepper, Cinamon, Plama rose, Roulfia, Lumbago roses and keoda have been tried in horticultural research station at Kalinga and found to be growing well. They can be successfully grown by the entrepreneurs and solvent extraction plants can be started.

Marketing of proceeds can be linked up with any medicine/perfume manufacturing company. Particulars of timing of crop, yield, present market cost etc.. are given in Annexure-III.

Phulbani being the most backward district in the State is devoid of the facilities for transportation, recreation and better civic amenities. Any entrepreneur choosing this area (since the district is characterised by entrepreneural shyness) must have enough self motivation and come forward with a developmental orientation. Government, supporting organisations and the financial institutions must change their attitude and take special care for these sophisticated manufacturing units to be established in this district mostly to uplift the economic condition of the tribals simultaneously utilising most fruitfully the available resources.

ANNEXURE I

Distribution of Forest Land

Name of the Block (1)		Area under forest in sq. kms. (2)	Per centage to total geographical area (3)	Per centage share with respect to district forest land (4)
1. Phulbani	..	342·87	72·58	4·63
2. Khajuripada	..	254·44	48·24	3·44
3. Phiringia	..	449·26	39·16	6·07
4. Boudh	..	610·81	57·35	8·25
5. Harabhanga	..	952·12	76·23	12·91
6. Kantamal	..	695·84	54·91	9·40
7. Baliguda	..	536·72	83·86	7·25
8. Nuagaon	..	241·62	56·08	3·26
9. Tumudibandha	..	1072·83	92·92	14·54
10. Kotagarh	..	1454·64	87·75	19·66
11. Chakapada	..	207·96	66·82	2·81
12. Tikabali	..	166·19	54·81	2·24
13. G. Udayagiri	..	24·19	28·76	0·32
14. Raikia	..	314·57	61·06	4·25
15. Daringibadi	..	72·22	52·51	0·97
16. District	..	7396·35	67·51	100

ANNEXURE II

Sales of forest Resources 1980-81

(Quantity in cubic metres and quintals)

Baliguda (80-81)		Phulbani	Boudh
Timber ..	7300³m	7.692	9,470
Firewood ..	21981³m	13.123	15,516
Bamboo ..	2,15,344·10	19,144·37	32,314·60
Tamarind ..	539·18	1,205·80	41·40 qtls.
Arrowroot ..	9·19 Qtls.	..	..
Mohua Flower ..	..	..	30·01 Qtls.
Shekoya ..	108·00	0·94	..
Hanking & Cleaning Nuts ..	336·01	3,583·71	33·0
Siali Fibre ..	1,179·60	..	55·0
Broom Grass ..	916·24	313·53	66·36
Genduli Gum ..	..	67·0	139·32
Sunari Bank ..	..	67·57	147·0
Sal seed ..	146·30	1,616·80	5,173 2,407
Mohua seed ..	..	3,433·35	..

Source—Chief Conservator of Forests, Orissa, Cuttack

ANNEXURE III

Name English/Local (1)	Scientific Name (2)	Time of growing (3)	Yield in Kgs/ Hectare (4)	Market Price Rs./Kg. (5)	Use (6)
1. Henber ..	Hyocymus nigar.	July to March (Four crops).	6,000	6·00	For manufacture of Phenobarbitone.
2. Vinca (Sadabihari).	Vinca rosea ..	All the year round..	6,000	15·00	Manufacture of Vinalgin, cure for cancer.
3. Black pepper (Gol Maricha).	..	..	1,200	15·00	Production of white pepper.
4. Cinamon (Dal Chini).	..	Harvesting after five years of planting.	1,200	300·00	Production of Geranol Active ingredient for many cosmetics out of leaves of the plant.
5. Palma rosa and Lemon Grass.	..	..	15,000 to 60,000 Kgs. leaf.	300·00	Ditto
6. Roulfia (Sarpagandha).	Roulfia serpentina.	..	..	..	Serpacin and Roulfin is extracted for munufacturing "serpasil" medicine for blood pressure.
7. Raktachita ..	Lumbago roses	..	..	..	'Lumbagin' is extracted for preparing gynaecological drugs.

Senior Consultant (Fin).
ORITCO. Ltd. Bhubaneswar

Problems of Tribal Education in Koraput district

Shri P. C. Mohapatro

Back ground of the district

Koraput was formed into a district under Orissa State on Ist April, 1936 when Orissa was curved out from the tail pieces of the neighbouring States of Andhra Pradesh (then Madras), Madhya Pradesh and Bihar. Prior to it it was a part of Vizagpatom district under the Madras presidency.

Koraput is the southernmost district in Orissa and is located between 17·50° and 20·30° north latitudes and between 81·27° and 84·10° east longitude. It is bounded on the north by Kalahandi in Orissa and Raipur in Madhya Pradesh, on the west by Bastar district in Madhya Pradesh, on the South it is flanked by Visakhapatnam and East Godabari districts of Andhra Pradesh and on the East by Srikakulam districts of Andhra Pradesh and Ganjam in Orissa.

Koraput is the largest district in Orissa and one of the biggest in India covering an area of 27020 square kilometres, which constitutes 17·34 per cent of the total area of the State. It is larger by 4·22 times than Balasore, which is the smallest district of the State. Physiographically, a greater part of the district is undulating plateau with a number of hills and mountains. Forests cover an area of 15210 square Kilometres which constitutes 56·29 per cent of the total geographical area of the district. This constitutes 22·85 per cent of the total forest area in the State.

The district is endowed with an abundance of mineral deposits. Iron ore, manganese ore, quartzite, limestone, china clay, graphite, ochre and red ochre are some of the important minerals found in the district. Recent investigations taken up in the district indicate that 314 million tons of buxite is available in Panchapatmali plateau. Tin deposits have been located in Mathili Mungaguda belt. Out of 17 mines covering an area of 3,334·98 hectares in the district, only six were found to be working in 1977 providing an average number of employment of 119 per day.

The district is also rich in power resources. The Machkund (Orissa's share) and Balimela power projects are generating 394 Mega watts and the Upper Kolab Project and Upper Indravati Project are expected to generate 467 Mega watts.

According to 1971 census the population of Koraput district stood at 20·43 lakhs which constituted 9·31 per cent of the population of the State. A special feature of the population of the district is the large concentration of tribal population, spread over in small dotted villages mostly operating under conditions of near isolating, cut off from the main stream of socio-economic development in the State. The district has the largest concentration of tribal population (11·51 lakhs) among all other districts in the State. The percentage of the scheduled tribes to the total population of the district is 56·34 per cent which is next only to that of Mayurbhanj (58·56 per cent) and much higher than that of the State average at 23·11 per cent. It has the largest variety of ethnic stock numbering 52 out of 62 tribal communities found in the State. The entire district is declared as scheduled area which constitutes 39·40 per cent out of the total scheduled area in the State. A study made by the Commissioner of Sche-

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1. Government of Orissa, Directorate of Mines, Mineral Year Book of Orissa, 1977 Orissa Government Press, Cuttack, 1980, p. 19.

duled Castes and Scheduled Tribes in 1967-68 indicated that out of the 18 weakest scheduled tribes in the State 13 are found in Koraput district.

The district has been divided into six subdivisions, 14 tahasils, 40 police-stations, 42 community development blocks, 449 grama panchayats and 6,124 villages out of which 5,683 are inhabited and 441 are uninhabited. A distinguishing characteristic of the settlement pattern of Koraput district is that it is predominantly rural. An enermous majority of the people forming 91·81 per cent of the total population live in villages. This is much more so in case of scheduled tribe population of the district among whom 97·56 per cent are rural.

Another distinguishing feature of the settlement pattern of the district is that these villages are very small in size. These villages are so small that 14·70 per cent of the total rural population are inhabited in 50·03 per cent of the inhabited villages having less than 200 people in each. This feature makes the rural landscape of Koraput different from all other districts in the State, 44·01 per cent of total rural population are inhabited in 80·40 per cent of the villages in Koraput district as against 33·78 per cent of the rural population inhabiting in 71·86 per cent of the villages in case of the State[1]. Taking into consideration the fact that a census village may contain two or more habitations separated by considerable distances, a large number of villages out of these small ones are also not compact villages but are scattered into a number of habitations. The dotting of small villages in the district make communication difficult and raises the cost of extending infrastructural facilities. It also raises important questions relating to locational planning and cost of development[2].

Literacy position in the district

Koraput occupies the lowest position in the literacy map of Orissa. Table I below indicates the comparative rate of literacy between the State of Orissa and Koraput district.

TABLE I

Unit	General (G) S. C. and S. T.	Literacy rate, 1971 including 0—4 age-group Total	Rural	Urban
(1)	(2)	(3)	(4)	(5)
Orissa . .	G.	26·18	24·09	49·00
	S. C.	15·61	15·14	22·57
	S. T.	9·46	9·20	18·17
Koraput . .	G.	10·58	8·02	39·39
	S. C.	9·20	8·42	18·60
	S. T.	3·25	3·17	6·35

Source—Directorate of Census Operations, Census of India, 1971, Orissa, Series 16 Orissa, Part I-A, General Report, Controller of Publications, New Delhi p/141.

Table I reveals that the rate of literacy among the general population in the district is 10·58 per cent as against the State average of 26·18 per cent. The rates for scheduled castes and scheduled tribes for the district are 9·20 and 3·25 per cent as against the State average of 15·61 and 9·46 per cent, respectively. In rural areas predominately dominated by the tribals, the rate of literacy among the tribals in the district is 3·17 per cent as against the State average of 9·20. In urban areas also the literacy rate among the tribals of the district presents a poor picture.

Growth rate of Literacy

The growth rate of literacy among the tribals of the district presents a still poorer picture will be evident from Table II

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[2] Director of Census, Census of India, 1971 Series 16 Orissa Part II-A General Population Tables, Orissa Government Press, 1972 pp. 115-116.

[3] Patnaik S. C.—Anatomy of Rural Poverty in Orissa and strategy of Rural Development, paper presented in the All India convention at Allahabad, February 1976.

TABLE II

Growth rate of Literacy among S. Cs. and S. Ts. in the State and district compared with the general literacy

Unit	General (G) S. C. & S. T.	Literacy rate (including 0—4 age-group population) 1961	1971	Growth rate of Literacy rate 1961—71
(1)	(2)	(3)	(4)	(5)
Orissa ..	G	21·66	26·18	+ 20·87
	S. C	11·57	15·61	+ 34·92
	S. T	7·36	9·46	+ 28·53
Koraput ..	G	8·14	10·58	+ 29·98
	S. C	6·55	9·20	+ 40·46
	S. T	3·17	3·25	+ 2·52

Source—Director of Census Operations, Orissa—Census of India, 1971, Orissa, Series 16—Orissa, Part I-A, General Report, Controller of Publications, New Delhi, P. 143.

The above table reveals that though the rate of literacy rates of Scheduled Castes and Scheduled Tribes are much lower than that of the general population, the rate of literacy among the Schudeld Castes has grown during the decade 1961—71 at a much faster rate than that of the general population. The growth rate of literacy among the Scheduled Tribes in respect of the State also indicates the same pattern because of very high rate of growth of literacy among the Schudeld Tribes of Keonjhar (+68·06 per cent), Sundargarh (+57·10 per cent), Mayurbhanj (+35·77 per cent) Balangir (+44·04 per cent) and Kalahandi (+34·09 per cent) districts. However, the growth rate of literacy among the tribes of Koraput district presents a deplorable picture.

Development of Education since independence.

Like in other sectors, in educational development, Koraput district was one of the most backward districts in the State at all levels during the post-independence period, particularly during the plan period. Table III represents the progress made in the educational development of the district during the last four decades ending with 1977-78.

TABLE III

Growth of Educational Opportunities during the last four decades in Koraput district

Year	Types of Schools	Number of Schools for			Enrolment					
					General		Scheduled Caste		Scheduled Tribes	
		Boys	Girls	Total	Boys	Girls	Boys	Girls	Boys	Girls
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1947-48	Primary	472	10	482	11,342	3,921	585	201	2,920	876
1958-59	Do.	918	8	926	26,760	6,005	973	346	6,136	1,342
1968-69	Do,	2,472	6	2,478	84,631	37,331	19,594	8,319	34,720	11,236
1977-78	Do.	3,921	2	3,923	1,37,381	62,257	27,310	12,001	56,384	19,610
1947-48	Middle	10	3	13	808	98	24	1	14	..
1958-59	Do.	17	1	18	1,794	784	47	13	71	11
1968-69	Do.	122	4	126	6,232	1,352	806	154	736	351
1977-78	Do.	287	3	290	13,366	5,433	792	301	942	340
1947-48	High	5	..	5	1,576	147	89	4	17	..
1958-59	Do.	9	1	10	2,743	403	149	71	74	19
1968-69	Do.	46	6	52	7,134	1,969	633	172	816	48
1977-78	Do.	71	10	81	11,385	4,250	994	146	946	91

Source—Director of Public Instruction, Orissa, District Educational Profile, Koraput O. G. P. 1979, P./24.

The above table reveals that, during 1947-48, the number of primary, middle and high schools in the district stood at 482 13 and 5 respectively. After a period of four decades their number increased to 3923, 290 and 81 respectively. Thus the expansion of general education during the period was about eight-fold in case of primary schools, 22 times in case of middle schools and 16 times in case of High Schools. The number of students who were reading in these institutions during the period increased by 13 times, 20 times and 9 times respectively in case of primary middle and high schools.

The enrolment figures in case of Scheduled Tribes marked an increase from 3,796 to 75,994 in respect of primary schools 14 to 1,282 in respect of middle schools and 17 to 1,037 in respect of High Schools during the same four decades.

The table further reveals that though the ratio of girl students to those of boys has steadily increased both in case of non-tribals and tribals, the tribal lag far behind when compared with non-tribal children specially with regard to female education. The drop-out rate of Scheduled Tribes girl students while passing from primary to middle school and from middle school to high school is heavy compared to that of the general students.

Special efforts have been made for the development of education among the Scheduled Castes and Scheduled Tribes during the plan period. During the 1st

Plan Period, five Ashram Schools, five residential Ashram Schools and 291 Sevashrams were set up in Koraput district. By the end of the Fifth Plan there were 11 High Schools, 66 Ashram Schools, 11 residential Sevashrams and 335 Sevashrams in the district. All Scheduled Castes and Scheduled Tribes students in these schools are provided with free reading and writing materials, garments, mid-day meals, etc. and free boarding and lodging facilities are provided in the residential institutions alongwith other facilities.

Problems of Tribal Education

The fundamental problems of education in tribal areas can be grouped under three broad heads, (1) Socio-Economic constraints, (2) Ecological constraints and (3) Internal constraints of the school system.

Socio-economic constraints

It is commonly accepted that socio-economic conditions of the family have their impact on the educability of the children. For a tribal family a grown up boy or girl is an economic asset. Girls give every kind of help to their mothers in the work at home. The tribal boys work in the fields with their parents during agricultural season. At other seasons, they help their parents in collecting minor forest produce and fire-wood, grazing cattles, watching the crops, hunting and fishing. The poor economic conditions of tribal parents does not allow them to spare their children to go to schools. Thus, it became a choice between 'bread and education'. In case of people who hardly get bread twice a day, literacy becomes a tall talk.

The occupation of the parents also plays an important role in their interest for their children's education. Studies made in this respect in tribal areas reveals that enrolment of children in primary schools from the families of salaried employees, petty businessman was more than from families of cultivators and labourers.[4] This finding is more applicable in Koraput district where 93·34 per cent of the Scheduled Tribes workers are either cultivators or agricultural labourers.

The income of tribal family is low. A survey conducted by the research wing of the State Tribal and Harijan Research-*cum*-Training Institute during 1967-68 revealed that the *per capita* income of the primitive tribal people of Orissa State is as low as Rs. 158·40 at current prices compared to the State average of Rs. 433·77.[5] It is also found that higher the educational level of the male head of the family, the greater is the enrolment of children in the schools. The apathetic attitude of tribal parents towards the education of the girls acts as another constraining factor of tribal education. Thus, the income of the tribal family, education level of fathers and sex of the children also act as constraints of tribal education.

Ecological constraints

In any isolated backward region, the geographical and communication factors are the important constraints in the spread of formal education. Though a number of primary schools have been opened in Koraput district during the Plan period as shown in Table III, there are many villages in the district which have no primary schools within a radius of 1·5 Kms. Out of 8,459 habitations identified by the State Educational Survey Unit in Koraput district only 70·59 per cent (5,971 habitations) have primary schools in them or within a distance of 1·5 Kms. Tha hilly geographical terrain and lack of communication facilities between different settlements of the district stand on the way of spread of primary education.

Internal constraints of the school system.

Educational expansion is also depends on the school system. Education suffers basically from the gap between the social system and the school system when the latter is not adopted to the local conditions.

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[4] E. V. Rathnaiah: Structural Constraints in Tribal Education—A Regional Study, Sterling Publishers Private Ltd., New Delhi, 1977, p-179.

[5] Government of Orissa, Planning & Co-ordination Department : Fifth Five-Year Plan of Orissa (Draft), Orissa Government Press, Cuttack, 1973, p. 595.

The important educational lags, which are found to have bearing on the extension of education in the tribal areas are detailed below:—

(*a*) *Timing*—The attendance of the students in schools in the tribal areas depends to a greater extent on the timings of the school hours and seasons. Absenteeism is found to be more during the seasons of agricultural operations and on the occasion of socio-religious festivals and rituals. The school timing, holidays and vacations are planned according to the general pattern followed in the non-tribal region all over the State instead of planning them according to the local needs. Hence, the attendance of the students in schools is poor in tribal areas.

(*b*) *Medium of Instruction*—One of the major problems in tribal education is that of language. The text books used in tribal areas are written in regional languages, with which the tribals are not familiar. The language used by the tribals vary from tribe to tribe and from place to place and it creates difficulties on the part of State Governments to write books on local tribal dialects. The language used by a tribal child is very poor and it becomes difficult for him to read the lessons written in regional languages and understand the ideas concepts and images contained therein.

(*c*) *Right type of teacher*—Many teachers working in tribal areas are non-tribals and they do not have identification with the people and the area as they belong to other areas. Such teachers neither knows the language of the people, nor their cultures and traditions. Adequate orientation is not provided to these teachers to equip—with necessary knowledge of the language and culture of the people nor with the basic skills in teaching the tribal children.

Added to these basic difficulties of teaching, a non-tribal teacher posted in a tribal area faces a lot of family problems of his own. He may not get a house to live in which forces him to maintain two separate establishments. They are occasionaly transferred and do not know the place of their next posting. Therefore, it is natural that immediately after posting they find out ways and means to escape to their own homes. Consequently the tribal education suffers due to the lack of posting of a right type of teacher.

(*d*) *Stagnation and Wastage*—It has been pointed out earlier that the attendance of the students in tribal areas are very poor. Whereas on the rolls one sees a large number of pupils, the actual attendance is generally low. Often, irregularity in attendance is common among the tribal boys. Sometimes the teacher does not come regularly and often he does not become punctual when he does not stay in the place of working.

This absenteeism and irregularity and lack of interest in their studies is reflected in stagnation. Many of the tribal child remain in the same standard for more than one year. Table III reveals that the rate of drop out among the tribal children is higher than that in case of the non-tribals. Out of the enrolment figure 75,994 in primary schools during the year 1977-78 among the tribals hardly 1,282 could read in middle schools. The problem of wastage is less severe in case of non-tribals. In Koraput district incomplete school is one of the important reasons for this phenomenon. In Koraput district most of the primary schools in rural areas are lower primary schools with the provision of a single teacher. This restricted education facilities provided in these schools leads to education wastage, in as much as the tribal boys cannot go to another village for reading in the upper primary schools.

Remedial measures

It has been pointed out that a tribal child is an economic asset to his parent and owing to sheer poverty can not avail of educational opportunities. Provisions of free education, free supply of reading and writing materials, mid-day meals, award of scholarships and uniforms has been able to attract the tribal children to some extent. However, in order to compensate the economic loss of the parents a small amount of pocket money, say Rs. 10 a month per tribal child reading in the schools would surely attract tribal boys and girls to schools in sufficient numbers.

The establishment of residential Sevashram and Ashram schools in tribal areas have been able to meet with the ecological constraints only marginally. However, taking into account the vast size of Koraput district and heavy concentration of tribal population in it, vigorous efforts need to be taken to establish more residential schools in the coming years. Attempts need to be made for the establishment of residential Ashram Schools in every Panchayat Headquarters and at least one residential High School in every five Panchayats. The Dhebar Commission has recommended that schools should be established in tribal settlements wherever 30 children of school-going ages are available and the school should be located within a radius of one mile. [6] This recommedation is more applicable in tribal areas like Koraput district mostly covered with dense forest and hilly regions.

The school timing in tribal areas should be flexible and adopted to local conditions. The Dhebar Commission and Elwin Committee have recommended that the handicap of low attendance can easily be removed by observing vacations and holidays to fit in with the agricultural and forest operations and social festivals. " School holidays should be adopted to local festivals and no child who absents himself for a wedding or funeral should be rebuked. It must be remembered that there is a full rich life in the village which is not planned on the sterotyped schedules of Education Department and it would be wise not to bring the two in to conflict." [7] The harvesting periods and festival period in Koraput district vary from tribe to tribe and sometimes from village to village within the same tribe. Hence, the village teacher should be given a free hand to plan his holiday list in consultation with the parents.

There are genuine difficulties in the preparation of text books in local tribal scripts. A few have suggested the use of local language and simplified Oriya language simultaneously to over come this difficulty. Others have suggested the use of local dialect written in the regional languages in the primary level. In the context of alround development of the tribals, the latter recommendation seems to be better. However, attempts need to be made to develop the tribal scripts for at least those tribals who number more than one lakh.

Reader in Economics

This means that the teacher must invariably know the tribal language. Consequently, it is desirable that local scheduled tribe candidates well versed with the tribal dialect need to be posted in the primary schools. The existing non-tribal teachers who have acquainted themselves with the tribal language of the place of their posting, need to be given an orientation course for a period of two months regarding basic needs of tribal children and motivating tribal children for education.

It should be ensured that teachers must remain in the place of their posting so that a better rapport can be established between the parents, students and teachers, to encourage more students to attend the school regularly. To ensure better interest among the teachers, residential accommodation and some additional incentive should be given to them. Dhebar Commission recommended for creation of a separate cadre for teachers in tribal areas for a period of 20 years.

Changes need to be made in the existing curriculum to meet with the socio-cultural and economic needs of the tribals. For instance, more emphasis should be given on better agricultural practices, poultry rearing, forestry, carpentry and the like. Such a type of work-oriented education can attract a large number of tribal children to schools and will make them self-reliant in future.

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6. Government of India, Rastrapati Bhavan : Report of the Scheduled Areas and Scheduled Tribes Commission, Volume I, 1960-61, Government of India, Press, 1961.
7. Government of India, Ministry of Home Affairs : Report of the Committee on Special Multipurpose Tribal Blocks, Government of India Press, New-Delhi, 1960.

Prospects of Scientific Fish Culture in Kalahandi district

Shri S. N. Mohanty

With fuller and efficient exploitation of existing freshwater resources, Orissa can immensely contribute towards the maximisation of fish production. As per the available information, Kalahandi district possesses 6,043 ha. (approx,) of water area. Out of the above, Bhawanipatna subdivision has 350 ha. readily available water area in the form of small ponds, large tanks, minor irrigation tanks. etc. They are not properly tapped at present for scientific fish culture methods. Hence in order to create awareness among the fish farmers or pond owners on modern fish culture technology and to demonstrate its financial benefits, one centre of Rural Aquaculture Project was setup in this district in the middle of May 1979. The project operated till the end of December 1979 under the Central Inland Fisheries Research Institute of I. C. A. R. with financial assistance of International Development Research Centre, Canada. Its counter centrc functioned at Bhadrak subdivision of Balasore district during the same period.

The areas of field operation of the project were located in four Grama Panchayats under Bhawanipatna Sadar Block which has about fifty ha. of water area mostly under Panchayat ownership and few under the minor irrigation project. However, seven ponds covering 3·5 ha. in the range of 0·23 ha. 0·8 ha. of area in seven villages were selected for the project demonstration. The villages were Medinipur and Saraglanji of Medinipur Grama Panchayat, Udaipur and Suagapur of Deypur Grama Panchayat, Ichhapur and Gudialipadar of Gudialipadar Grama Panchayat and Dadpur Grama Panchayat. Six of the selected ponds belonged to their respective Panchayat Samiti while one belonged to a private pisciculturist. Necessary administrative formalities and execution of agreements with concerned pond owners were completed before the initiation of the project.

The project work included varied aspects of fish culture such as nursery and stocking pond preparations and management, composite fish culture or polyculture of Indian major carps and popularisation of fish culture through talks demonstration and screening of films among the literate and illiterate masses in the urban as well as remote rural areas.

All the ponds were scientifically prepared for nursing the spawn and raising them to advanced fry stage. Fry of five species viz., Catla, Rohu, Mrigal, Silver carp, Grass Carp and subsequently advanced fingerlings of common carp were stocked in all the project ponds at the rate of 3,000 Nos./ha. in the month of September 1979. The common carp fingerlings were stocked in some of the ponds in late October and November 1979, The ponds were all treated with cowdung, urea and superphosphate at the calculated dose. The fertilization was necessary for supplementing the natural fertility of the pond.

The fishes were fed daily with supplementary feed which was a mixture of ground nut oil cake and rice bran. Tender grass was fed to Grass carp due to non-availability of suitable aquatic weeds in those areas. Periodical checks were made to assess the growth and health of fishes.

One programme of netting demonstration was arranged in the presence of the Collector, Project Director, D. P. A. P. S. D. O., B. P. O. and other State and Central Government officials, Panchayat sarpanches of all central panchayats and interested fish farmers. In three to four months rearing the fishes recorded healthy growth rates as given below with survival of about 80 per cent of the stocked numbers form an initial size of 5 to 10 gms.

Catla ..	240 g.	520 g.
Rohu ..	100 g.	600 g.
Mrigal ..	150 g.	366 g.
Silver carp ..	400 g.	650 g.
Grass carp ..	100 g.	775 g.
Common carp ..	200 g.	250 g.

Fish growth in two ponds viz., Phulabandha of Saraglanji village and Hill pond of Gudialipadar village were not satisfactory probably due to very low water level. On the basis of the above growth rates, anticipated growth of each species within a period of ten to twelve months rearing is about 1 Kg. in average. In the light of this growth and survival rates, a production of 3,000 kg.ha./yr. can be expected.

Constraints, as experienced for development of fish culture in rural areas can broadly be put under four aspects i. e., Psychological, Social, Technical and Financial. The poor fish production and similar economic benefits as obtained by the farmers under traditional practices has brought about loss of confidence in adopting further advanced fish culture technology. However, the project demonstration helped to open their eyes, as many of them felt and changed their attitudes and views towards fish culture. This work to a great extent has generated the enthusiasm for fish culture development.

Secondly use of mahua oil cake, a suitable piscicide and of organic and inorganic fertilizers in Panchayat or community ponds is always objected by the villagers who mainly depend upon the pond for drinking and other domestic purposes. Restrictions always arise out of objections against 'pollution' of the pond water. Pollution in this case is referred to the rich growth of plankton.

Thirdly technical constraint is an important and serious one. All the practices involved in modern technology are new to the fish farmers and they feel that the entire work is complicated one which cannot be easily put into practice by them. Availability of quality fish seed is another important technical constraint. Fall of water to a dangerously low level in almost all the ponds and use of water for agricultural purposes in drought period are two important impediments. Lack of efficient fishery extension machinery poses further constraint.

Lastly the low purchasing power and non-availability of input items within a reasonable distance of the farmers' ponds is often observed as a discouraging factor among the farmers. Harvesting and marketing may also be considered as constraints to a certain degree. Limited demand of fish and low purchasing power of the village community is likely to compel a rural fish farmer to go for small scale harvesting which will in turn add to cost of harvesting. A lot of problems are experienced for marketing the fishes in bulk quantities in remote village which have no communication facility to a nearby consuming town.

In Kalahandi district, the majority of ponds belong to different Panchayat Samitis. Most of the private pond owners are economically well placed and influential people in society. The response of the respective panchayat authorities was of course encouraging. With the greater part of the water resources in the district remaining under the control of panchayats, real impact of the technology can be felt only by the effective adoption of the technology in Panchayat ponds. Devoted and sincere sarpanchas with the co-operation of the village community can substantially enhance the panchayat revenue. However, under the panchayat system of ownership the panchayats are unlikely to make satisfactory progress. It is desirable that the ponds should be leased out either to scheduled tribe or scheduled caste individuals or to needy and economically backward individuals or co-operatives on whom the foundation of rural development fully depends.

Freshwater Aquaculture Research and
Training Centre of CIFRI, Kausalyagang,
Bhubaneswar-751002, Puri.

The Story of a successful life
(Self madeable person)

Shri Haraprasanna Das

It was 11·30 p. m. The last bus has just left the stand. The main gate of the bus stand was about to be closed when my motor cycle approached it.

The small but busy, noisy and over crowded Orissa Road Transport bus stand of Bhubaneswar, the Capital of Orissa, had lost its charm of the day and was dead in silence. Very few passengers were there, preparing for the night halt. The shop keepers were going to close their shops.

But the only exception was Sridhar Sahu, the old news paper vendor in the bus stand. He was busy in checking the news paper packets with their addresses and arranging them in order for distribution. A 12 year old boy was helping him.

Even though I had fixed the appointment with him three days before, I had to wait for sometime to start the interview. "The work will not be over now, you can start your work side by side", he said in a very reluctant mood. I started the interview in a very informal way.

Sridhar found it difficult to remember his exact age. He guessed it to be nearly 35 or 36. He is a handicapped person. Both of his legs are short and under-developed.

"My legs were not like this from my birth. I got an injury on my throat when I was only three-years-old. It developed to tetanus and as a result my legs became like this. That is my fate."

Sridhar is married. He has three daughters. He stays with his family in a self-built cottage in the slum just behind the nine-storeyed building of the State Government offices-

I asked him about his business. It was very interesting to note that he had neither a book-stall nor a specially made cabin for his business. He sits on the floor.

"My business includes both sales and distribution of Oriya daily news papers only. I sell the papers here except the Samaj, which is being sold by their own vendor. I do the distribution work for all the daily papers including the Samaj also".

"The distribution work starts early morning at 4·45 a. m. and continues till 10·00 a. m. if the buses come in time."

Sridhar has employed two boys to assist him. They have to receive the paper packets, which comes at different times at night and send them by the buses in the morning.

He is not satisfied with the work of his employees. They are not that responsible as expected for this job. So most of the time he has to spend the night in the stand for the work.

I was surprised to know that he has been doing this business for the last 21 years. He had started his business in the old bus stand in the year 1960. He is handicapped. He can not walk. He crawls on the ground by the help of both of his hands with a pair of specially made gloves. Looking upon his physical condition anyone can hardly believe that he is a seasoned and responsible businessman.

I changed the topic. I was more interested about his background history. He narrated the story without any hesitation. But it was evident that there was a clear touch of pathos in his tone.

"My native village is Mahanala of Ganjam district of Orissa. Father expired when I was only three years old. We were three brothers and two sisters. After the death of my father I became physically handicapped. The elder brother was maintaining the family. I was considered as a burden to them. I could not adjust to my sister-in-law (bhabi). After a dispute with her I left home and came to Bhubaneswar at the age of 14".

"At first I stayed with one of my brothers at Mancheswar station (10 km. from Bhubaneswar). Then I came to stay in the bus stand. I was a refugee there. The bus stand became my permanent residence, with the booking counter as my bed room. My life took a new shape. It was dark all around me. I lost myself among the busy crowd of the stand".

"I had no source of income. I was fortunate to get the sympathy of Mr. Nanda babu (an employee of O. R. T. Company) who requested the conductors to donate me 25 paise each everyday out of mercy. I had to live on that. Sometimes I had to spend the night without food".

Sridhar had several times felt his life to be cursed but he was never disheartened. He started selling newspapers on commission basis under another newspaper vendor, who was giving him four to five rupees daily. After few months he came to know the main agent and started his business independently. Gradually he developed direct contact with newspaper managements. He was recognised as the one and only newspaper vendor in the bus stand. Thus his business expanded day by day, year by year and now he has become the real backbone of the newspaper distribution in Bhubaneswar.

"It seems you have now no problems. How do you feel your life now and what is your future plans", it was my last question.

"No doubt I do have a better living now but I am not at all happy. The reason is that I am physically handicapped. I have to depend upon others for any of my works. I want to expand my business but I cannot rely on my employees. They are not that responsible or faithful as I expect them to be. I cannot bring my dreams to reality. Even though I have desire and scope enough to expand it further, I am falling back. For example, I have money to purchase a motor cycle, can I drive it? This is because I am handicapped. God has cursed me and made my life limited."

Sridhar's voice was choked. It was high-time to end the discussion there. The time was nearing 1·00 a. m. of the next day. I got up. The specially made three-wheeler was lying at a distance which he had purchased for Rs. 350 for his easy transport. I felt as if that was the only one responsible and faithful friend of Sridhar in this world.

Thanking him a lot I came back to my motor-cycle and a good start to the engine.

Jr. Scientific Officer,
Directorate of Oilseeds Research,
Rajendranagar, Hyderabad-500030.

Onward environmental planning

Shri Gyana Ranjan Mohanty

The ecological movement is the need of the hour. The conservation of the environment programme is the urgent task before the Government and the people. Active social participation is essentially needed for the successful implementation of these projects and ambitious programmes relating to environmental planning. There is now anxiety about the destruction of the forest resources by the rich as well as the poor. The haves plunder the natural beauty out of greed and the have-nots destroy it out of need. And that need is basic to his existence. This sort of ugly action kills the beauty of the nature, whom we say our friend, philosopher and guide. Surveys undertaken by the voluntary organisations, research scholars and the National Environmental Institute reveal that the general environment of the important cities like Bombay, Calcutta and Madras and their peripheral countryside is seriously polluted. The problem of pollution in these regions is alarming. The causes cited by the environmental scientists are industrial affluents, bad swerage system, speedy unplanned urbanisation, growth of slum areas in the towns, lack of proper maintenance of automobiles, lack of environmental education, use of low quality fuel, etc. Above all unsystematic planning relating to environment, irrigation projects and placement of industrial estates are also causing hardship to the common man. In the course, there is rapid diminishing of the quality, what have become inevitable to our very existence.

The exodus of the rural poor is becoming a serious challenge to the social scientists. The rural slums as well as the urban slums both dehumanise the entire atmosphere. Study made by the Natural Building Organisation indicated that "slum population in urban areas in 1979 was about 25 million and would go up by 40 per cent increase in 1985 in metropolitan cities with a population of 10 lakhs; and above 35 per cent in the remaining cities of more than one lakh population". The slum areas are becoming the breeding ground of social evils. Lack of basic amenities such as community life, drinking water facilities, planned drainage set-up, sanitary conditions has made the environment completely unsuitable to live. Quality of housing in these slum areas is poor. Thus the policy on environmental planning recognises the fact that only by securing a balanced and co-ordinated development of the industry and agriculture in each part of the country, could the nation attain higher standards of living. Therefore, in the totality of the problem, the development of scientific temper has assumed utmost significance. It is heartening to note that the Government of India has been acting in this regard. Lot of thinking through discussions, seminars, debates have been taking place. The new department of Environment was created by the Government of India in the year 1980. Its functions are to look into the administrative steps to keep our 'environs clean'. It will guide the entire administrative machinery of the country for successful implementation of the programme. This department will co-ordinate the scientists and the technologists in the call for ecological movement. Every important construction work or project must go through this department. Environmental consideration must be taken before going to execute the construction plans. Thereby, ecological stability can be strengthened.

The Government of Orissa declared the formation of the department of "Science, Technology and Environment" in December 1982. This department follows the guide-lines set up by the NCEPC. (The National Committee on Environmental Planning and Co-ordination). This National Committee, which was set up in 1972, deals with special problems relating to natural resources and their management, industry, environment education, human (rural and urban) settlements, environmental awareness through a number of sub-committees. The Environmental Research Committee and Biosphere Research Committee are also formed to give necessary assistance in executing environmental planning. So also the Orissa Government has recently constituted an apex body named the Council of Science, Technology and Environment with many distinguished scientists, eminent technologists and expert environmentalists to aid and advise the different administrative departments of the State Government in framing decision regarding the improvement of the human environment. There is now more emphasis on social forestry and city parks. Incidentally, a scheme of social forestry, agro-forestry have been programmed in the State. This forestry will create a potential reservoir of green manure, fuel wood, medium quality timber, green fodder. It will help the human being and the cattle in its day-to-day life. The socio-economic impact of this programme on the rural areas is important to locate. The programme of raising trees, grasses and fodder in the farmers' "own lands, common lands of the villagers, waste lands and degraded forests close to habitation" will certainly reap fruits. The idea behind this scheme will provide substantial employment opportunities and will also increase the environmental protection. It will create a healthy atmosphere between man and the nature. As a result of which, rain will come naturally, the natural calamities will decrease. There will be no loss of fertile soil and thereby deforestation will be checked.

The ecological movement must go ahead and give a fillip to the economic development. The natural resources of the country must not be utilised for sectarian interest. Several efforts are on, at present to extend the area under forest and to accelerate the balanced economic growth. Special attention has to be given to the weaker section of the hill, tribal and backward regions in this regard. A sizeable number of our cities and villages should be covered by this environmental planning to have a different social look.

One very important impediment in the ecological movement has been the low level of general awareness among the people at large. Since long, the people have been exploited by various interest groups. Emphasis should be laid on improving the conscious level of the mass to claim their due in the developmental process. So there is an immediate need of an intensive programme by which we can educate the people of the merits of environmental planning. People must have the mind to fight against health hazards due to lack of environmental conditions. Although we have achieved a lot in technological and industrial field, but at the same time there is great strain on the ecological system.

The analysis of the environmental planning makes it clear that it is a scientific approach which aims to start a new society. This will encourage the beautification process of the cities and villages. It will give life, its meaning and taste. Thus the task before the public in this regard is very delicate and complicated. The personnel engaged in this scheme should be trained in order to have a better insight into the problem and to perform their duty in scientific manner. The concerned department, voluntary and social institutes, the students and the teachers should come forward with strong determination and zeal to onward environmental planning.

Lecturer in Political Science,
Maharishi College of Natural Law,
Saheednagar, Bhubaneswar-751007

Bio-resources of the Sea :

A GLIMPSE ON FOOD PROBLEM

Shri P. K. Mohanty

The ocean covers an area of 71 per cent of the earth's surface with an average depth of 3·7 Km. Ocean is predominant in the southern hemisphere which is also known as marine hemisphere. The five major oceans of the world are the Pacific, the Atlantic, the Indian, the Artic and Antarctic. The Indian ocean basically enjoys the southern hemisphere and is the smallest of the three major oceans.

Broadly speaking, ocean is the source of minerals, Power, petrolium and lastly even food. The unique feature is the high salinity which makes it the richest source of elements and minerals. Although our scientists are aware of the fact that the oceans are the sources of everything but still then, they have not been successful in the exploration of the natural sources from the same. The greatest problem of the world and India is the food problem, due to the higher density of population. The world population continue to grow and is likely to touch 11 billion by the year 2,100 as estimated by united States, and the present population of India being 683 million by the Census of 1981. With this statistics it should be well imagined what a tremendous human population in India is moreover, our agricultural output has not been proportionately increased. In analysis of the food-problem of the human race, one should not overlook the fundamental fact that three-fourth of human settlements are along the banks of the rivers or the coastline of the ocean. It is estimated that ocean contributes only 5 per cent of the world's food consumption. The reason being our complete negligence towards the noticeable exploration of marine food resources. Therefore, at present the only solution for our food problem is expected to be solved by the marine source.

A small country like Japan is only consisted of some major islands like Honshu, Hokkaido, Shikoku and Kyushu. The land-mass is not enough for their agriculture for which their staple food is the marine food. This is the only country in the world with successful excavation of marine food resource and with maximum utilisation of the same. Therefore, Japan is not in the mark of food crisis and is most advanced in the matter of modernised fish farming. This mariculture has been employed extensively to cultivate mussels, scalps, shrimp (Prawn like organism), cat fish, tuna and others. In spite of new technology mariculture has not been adopted widely all over the world. The total world wide mariculture production is only 2 million tons which is 4 per cent of the total world catch.

It is interesting to note that fish farm an important constituent of our food, rich in protein (richest in animal protein). However, even with all the advances in methods of harvesting, locating and catching of fish, fish contribute only 10 per cent of protein to our diet only due to our poverty. There is a Chinese proverb which says, "If you give a person a fish a day, you are giving him a meal for the day, but if you teach him how to fish, you provide him meals for the rest of his life". This clearly pictures the significance of the art of fish farming for intensifying the productivity of fish. The proportionate fish catch in the various ocean of the world was: Pacific ocean 53 per cent, Atlantic ocean 40 per cent, Indian ocean 5 per cent and mediterranean 2 per cent. Thus within the total world catch the major ocean Pacific and a large coast live, the total production of fish in 1981 was 2·4 million tons of which 1·4 million ton is from the sea and 1·0 million ton from Inland water.

Apart from the fishes marine turtles are also a major marine food which were chiefly exported to different places for the purpose of food. Since the population of these turtles are going to be depicted, our Government has declared not to kill after the Wild Life Protection Act. During this crucial period active steps should be taken for the increase of these turtles by which it can suffice our purpose for the dietary problem. Certainly the production of these should be enhanced for the solution of food problem. Thirdly, different varieties of molluses like mussels (locally called Samuka), snails, sepia, loligo, etc., are also the sources of marine food. Though we are in abundance with the sort of food but still then, we are far away from these.

Next to the animal products let the seaweeds be taken into consideration. Sea weeds which are generally considered as useless could offer a solution for the hungry millions as an alternative for food because of its high nutritional value. Sea weeds could be ceased in a variety of ways for food, pharmaceutical, textile purposes. For example, Algin, Canageenin and Agar are three major substances which are extracted from the sea weed and are used in a variety of ways in the food preparation, such as icecream, malted milk, cheese, chocolates, puddings and salad dressing such as mayonnaise. Apart from these there are many other varieties of sea weeds which can be used on food, fodder, fertiliser and even biomass. At present, the cost of harvesting and processing sea weeds is high and the Japanese scientists have been successful in cultivation and with the production of 6 crops per year. Sea weed industry should be encouraged and be treated as a part of the rural development programme for poor people living along the coast.

Apart from the sea weeds, there is a far richer source of sea food, namely, plankton, the microscopic plants and animals that abound in sea water in millions turning into nutritious soup. These planktons are of two types—Phytoplankton and Zooplankton. The most numerous types of this Zooplankton are called copepods which are much more than all other animals including insects. These copeopods take phytoplankton, then small fishes take Zooplankton and then larger fishes take smaller fishes—likewise completing the marine food chain. This indirectly implies planktons are also quite essential to be maintained for the development of the larger animals like fishes and whales. For the proper growth of the plankton pollution of sea water should be checked. By the end of this century hopefully, scientists will be able to perfect these techniques to make plankton, the greatest addition to world's food supply for man as it is estimated that the mass of phytoplankton in the ocean is approximately 0·2 million billion tons which is the largest quantity of the living species in the ocean.

Considering the vital importance of the ocean resources for development in the food crisis by developing appropriate technology and capability, the Government of India has set up the Department of Ocean Development (DOD) to carry out the broad manifold objectives as well as monitoring and implementing various development programmes on the Ocean Science and Technology. However, in near future it is expected that our biologists will meet these challanges of global crisis with determination for a better economic and prospective future.

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Lecturer in Zoology
Utkal University, Vani Vihar,
Bhubaneswar-751004

THE ROLE OF YOUTH IN THE YEAR OF PRODUCTIVITY

Shri Sanjaya Kumar Pradhan

The young generation bring about many changes in every country. They have played a vital role in freeing our country from the colonial rulers in the pre-independence days. Similar actions have also been played by them in China, Soviet Russia and many other countries. But unfortunately the youth community in our country and also in other countries are moving in a reverse trend. They evolve themselves in destructive action and pose a serious problem for the authorities. There are many factors for this type of unrest among the youth community. Lack of employment opportunities and lack of guidance might be two major reasons for this.

A tremendous youth force should no longer be ignored. The youth power should now be utilised for constructive purposes. Especially the role of youth in a developing country like ours is tremendous. We are now observing the year of productivity. But the question arises why should we observe this year of productivity ? Are we not producing enough for our requirement ? One will confuse to give an appropriate reply to this. There is an upward trend in our food production. Since the implementation of the Five year plans. We have multiplied our irrigation potential. We have increased generation of power from all available sources. But at the same time we have also damaged and destroyed a considerable amount of public property by taking recourse to strikes and dharanas. Besides this the population in our country is growing at a very rapid rate.

The youth should now come forward to check this and an atmosphere of involving the youth in developmental activities should be created by the authorities and co-operation of the citizens should be sought. In some States separate departments have started functioning for mobilising the youth in the rightway. In our State the Education Department is linked with the youth services. Our Government have taken positive steps to organise youth clubs, libraries and cultural agencies. The youth organisations have responded to these programmes. They have gained consciousness and have involved themselves in constructing village roads, clearing weeds from the tanks, constructed club houses, school buildings, etc. They are exchanging ideas among themselves. On the other hand Government help these organisation to encourage them. It is marked that in villages where the youth communities have involved themselves in development activities crimes and anti-social activities have shown a decline.

Let us turn our eyes to the other aspects, self-reliance should be created among the youth that they will be able to shoulder greater responsibilities in transformation of the progress of our country. For example the State Government declared the new State. Many things are required to materialise this. Land, Money, Power, water, industrial-sheds, technical assistance, etc. Government can provide assistance to fulfil all these. But Government can not create intrepreneures. The young educated ones should come forward to take advantage of all these. Fortunately the young entrepreneurs of our State have proved their worth in the recent past. There was a tendency among the young educated mass to get a job either in a Government office or in a private sector. The earning being inadequate they had to suffer a lot. But at present they prefer to put up a small industry and lead an independent life. It is understood from the daily newspaper that thousands of small and cottage industries are being registered. They start production every month. This has a dual effect. The first is that it provides an income for the entrepreneur himself and secondly it provides employment to others. Ultimately the production increases and makes available more comforts to the people.

Here again another vital aspect may be considered. It is true that we have made a headway in achieving progress in industry, agriculture and in other fronts also. But this falls behind the rate of population growth and we fail to get the desired effect. We are still standing in a long queus to get our ration. We fail to get a ticket for our journey and we run for obtaining a Cinema ticket in block. In order to bring about a a stability in these we must think of Malthusian theory of population. We must think of Family Welfare Programmes. Government have already introduced many programmes. But due to certain conservative ideals which still exist in our society the programmes instead of giving any good result give a reverse effect. The youth should come forward and convince the people to act properly. They can more effectively convince the people to involve in development programmes.

The role of youth should no longer be ignored. Especially during the year of productivity is being observed with a view to improve the living standards of our people. We as a free nation should no longer depend on other nations. We have enough of skilled men, enough of scientists. In the political field also our leaders have proved their worth in the world organisation. It is high time for us to exploit our resources and manpower and the young one should not wait any longer. This is the time to give a good start. There is proverb "Strike the iron when it is hot". But for us the iron is not only hot, it is red hot.

Qr. No. E-292, Unit 8
Bhubaneswar

(*From page 4*)

to be taken care of and everything has to be worked out with an eye to detail.

I am confident that the Prime Minister and the Government of India in including this as a part of the new 20-point programme have brought home to all of us the tremendous problem faced by the country and the need for continuous and intensive efforts in this direction.

Vice-Chancellor
Sambalpur University
Jyoti Vihar

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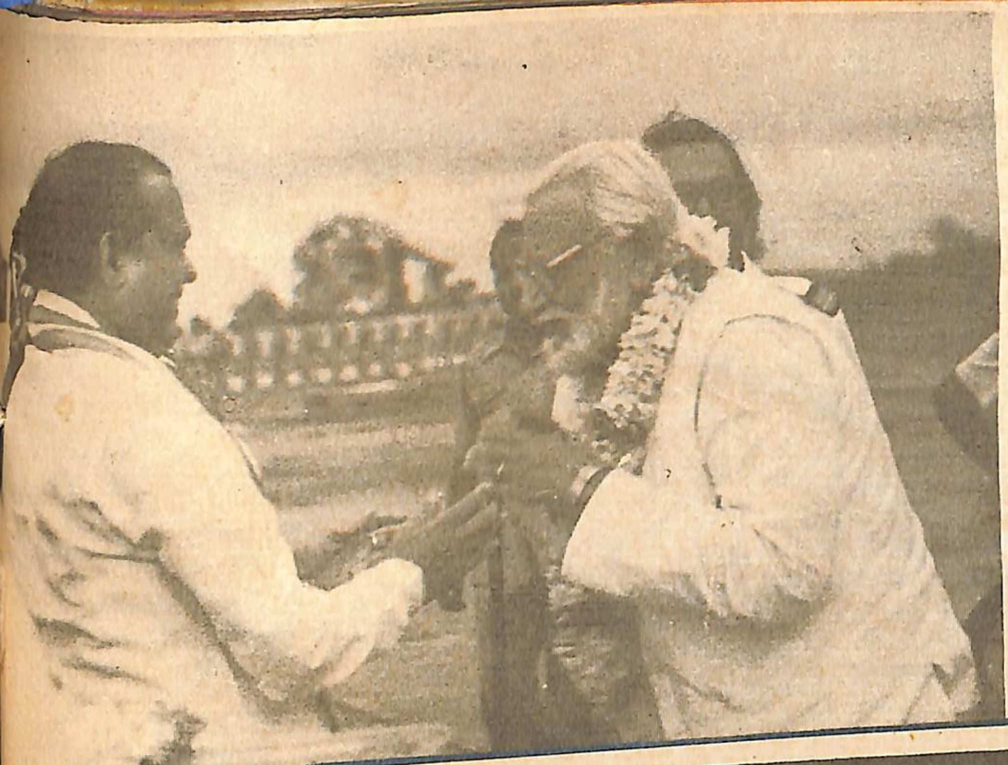

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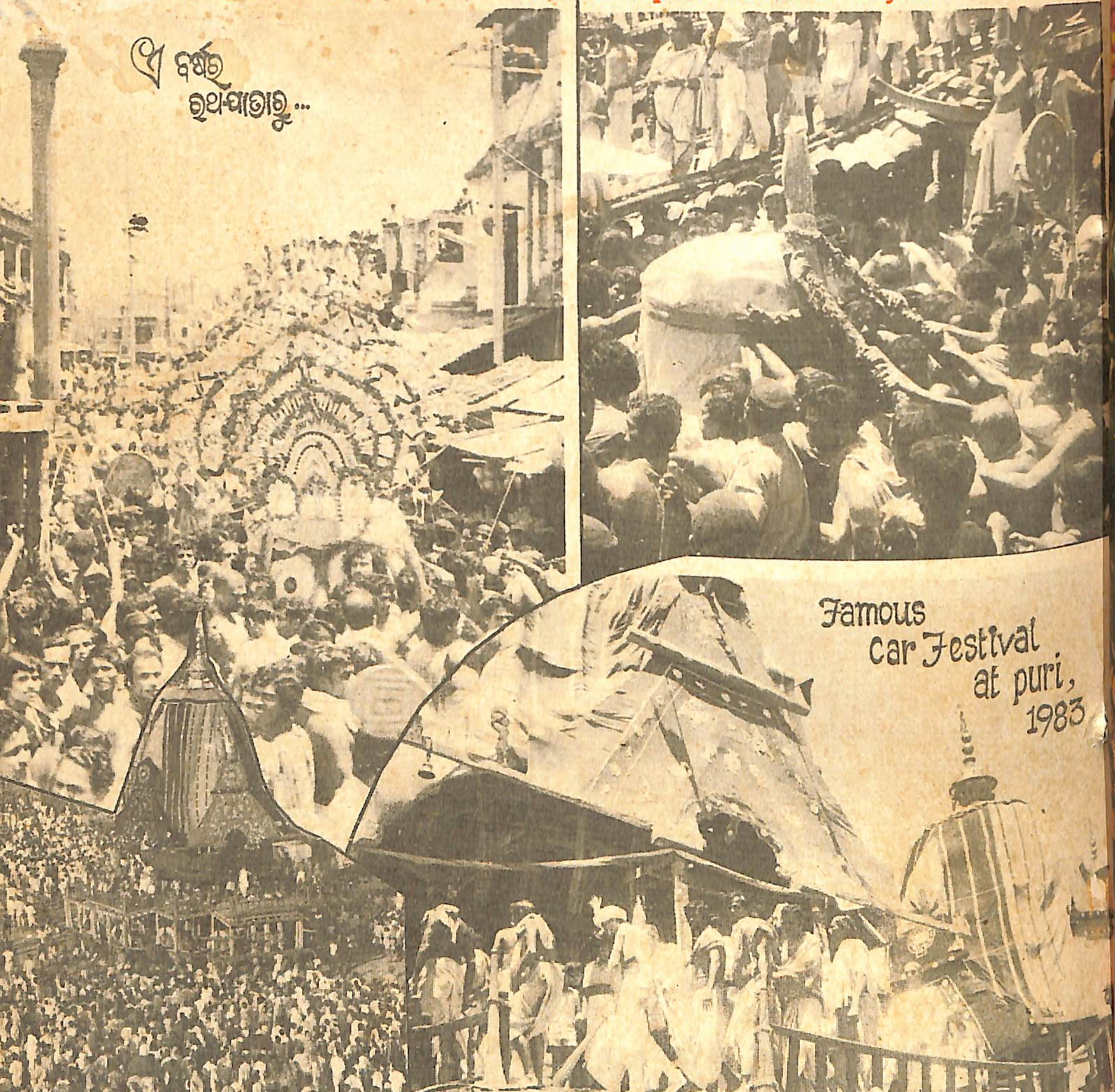

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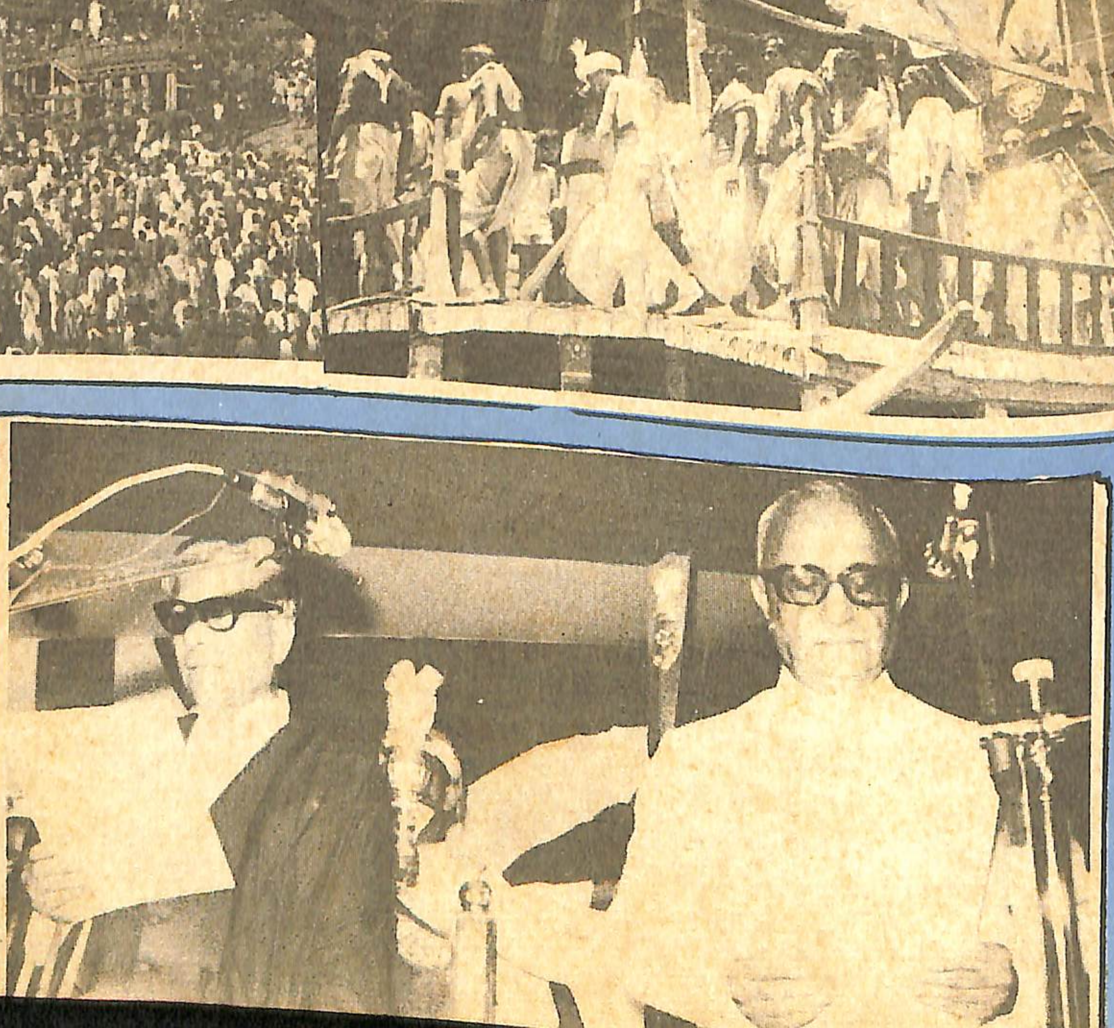
Famous car Festival at puri, 1983



SHRI D. PATHAK SWEARING IN AS CHIEF JUSTICE OF HIGH COURT, ORISSA, SRI POONACHA ADMINISTERING OATH OF OFFICE.

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